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Piping Benchmark Problems for the ABB/CE System 80+ Standardized Plant

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ABSTRACT

To satisfy the need for verification of the computer programs and modeling techniques that will be used to perform the final piping analyses for the ABB/Combustion Engineering System 80+ Standardized Plant, three benchmark problems were developed. The problems are representative piping systems subjected to representative dynamic loads with solutions developed using the methods being proposed for analysis for the System 80+ standard design. It will be required that the combined license licensees demonstrate that their solutions to these problems are in agreement with the benchmark problem set.

ABSTRACT

To satisfy the need for verification of the computer programs and modeling techniques that will be used to perform the final piping analyses for the ABB/Combustion Engineering System 80+ Standardized Plant, three benchmark problems were developed. The problems are representative piping systems subjected to representative dynamic loads with solutions developed using the methods being proposed for analysis for the System 80+ standard design. It will be required that the combined license licensees demonstrate that their solutions to these problems are in agreement with the benchmark problem set.

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EXECUTIVE SUMMARY

The NRC staff has identified piping and pipe support design as one technical area where engineering information in sufficient detail can not be provided for the ABB/Combustion Engineering System 80+ standard design to allow the staff to make a final safety decision under the rules of 10 CFR, Part 52. For this and similar areas the staff will use design acceptance criteria (DAC) verified by inspections, tests, analyses, and acceptance criteria (ITAAC) to enable the final safety determination. One element of the piping DAC requires the combined license (COL) licensee to verify the sufficiency of the computer codes and modeling techniques to be used to complete its piping stress analyses. To provide the basis for this verification, the staff developed a System 80+ specific piping benchmark program. The COL licensee will be required to develop solutions to the benchmark problems and to demonstrate that those solutions meet the acceptance criteria specified in this benchmark program report.

The benchmark program consists of three piping problems involving two piping systems representative of the System 80+ design. One system represents a portion of the Main Feedwater Line and the other represents the Pressurizer Surge Line. The problems provide analytical benchmarks for three analysis methods, the uniform support motion response spectrum analysis method, the modal superposition time history analysis method, and the direct integration time history analysis method. The response spectrum method and the direct integration time history methods are applied to the Feedwater Line while the modal superposition time history method is applied to the Surge Line. In all analyses the excitation functions are representative for the System 80+ standard design. This report presents the benchmark problems and includes all the information needed by the COL licensee to perform the analyses and evaluate the results. Acceptable analysis methods will estimate natural frequencies to within 2%, maximum pipe moments to within 5%, and support reactions and maximum displacements to within 10% of the benchmark results. A COL licensee having demonstrated this level of accuracy may use the benchmarked analysis method without further review. In instances where some deviations from the acceptance criteria occur, the results and justification for such deviations shall be documented and submitted to the staff for review and approval before initiating piping qualification analyses.

1.0 INTRODUCTION

1.1 Purpose

This report describes the NRC benchmark program for the verification of computer programs that will be used by combined license (COL) licensees to complete the design and analysis of piping systems in the ABB/Combustion Engineering (ABB/CE) System 80+ Standardized Plant. It provides detailed descriptions of the benchmark problems including geometries, material properties, analytical methods, input loads and solutions. The report also provides the acceptance criteria which must be met to demonstrate that the COL licensee's solutions to the benchmark problems are acceptable to NRC.

1.2 Background

In reviewing the design certification application for the ABB/CE System 80+ under the rules of 10 CFR Part 52, Reference 1, the NRC staff identified a number of technical areas in which the applicant did not provide design and engineering information in sufficient detail to make a final safety decision. One of these areas was piping and pipe support design where ABB/CE did not have the as-built or as-procured information to complete the final design. To resolve this issue, the staff developed an alternate approach using design acceptance criteria (DAC). The DAC are a set of prescribed limits, parameters, procedures, and attributes upon which the NRC relies in making a final safety determination to support a design certification. The DAC are objective (measurable, testable, or subject to analysis using pre-approved methods), and must be verified as a part of the inspections, tests, analyses, and acceptance criteria (ITAAC) used to demonstrate that the as-built facility conforms to the certified design. The combined license (COL) licensee will use the DAC to demonstrate conformance with the System 80+ standard design during construction. This will enable the NRC staff to make a final safety determination through the review of the COL licensee's satisfactory implementation and verification of the ITAAC.

The NRC staff's evaluation of ABB/CE's proposed DAC approach for the System 80+ piping design was documented in their final safety evaluation report. In that document the staff provided their evaluation of the ABB/CE certified design commitments and corresponding ITAAC for the System 80+ piping design. One of these commitments was to verify the piping analysis modeling and the computer code to be used by the COL licensee to complete its piping stress analysis. The COL licensee will verify the sufficiency of the computer code and modeling techniques in conjunction with the DAC. The NRC found this commitment acceptable provided that the computer program and the modeling techniques will be evaluated using the NRC benchmark program. The staff concluded that once the COL licensee successfully completes the DAC verifying that the piping benchmark results are within the acceptable range of values specified in the benchmark program, there is reasonable assurance that the computer code and analytical modeling techniques to be used to complete the System 80+ piping design and analyses are adequate.

1.3 Benchmark Program Overview

The benchmark program requires the COL licensee to construct mathematical models and perform dynamic analyses of specified representative System 80+ piping systems using his own computer program. When the analyses are completed, the COL licensee will compare his results to those of the benchmark problems given in this report to ensure that the results meet the range of acceptable values. Any deviations from these values, as well as, the justification for such deviations, shall be documented and submitted to the NRC staff for review and approval before initiating final certified piping analyses. This benchmarking will provide assurance that the computer program used to complete the System 80+ piping design and analyses will produce results that are consistent with results considered acceptable to the NRC staff.

This report presents the benchmark problems and gives all information needed by the COL licensee to perform the analyses and evaluate the results. The Brookhaven National Laboratory (BNL), under contract with the NRC staff, developed these problems based on representative piping system design information provided by ABB/CE during the NRC technical review and evaluation of the System 80+ standard design. The benchmark problems represent a portion of the System 80+ Main Feedwater Line and the Pressurizer Surge Line. Although the piping benchmark problems are considered representative System 80+ piping configurations and loadings, they are not intended to be final designs. BNL constructed mathematical models of these two piping systems using the PSAFE2 piping analysis program.

This report provides a complete description of the input parameters for each problem including piping dimensions, material properties, weights, support stiffnesses and locations, load definitions and damping values. The dynamic analysis methods benchmarked include the uniform support motion response spectrum method, the modal superposition time history analysis method, and the direct integration time-history analysis method. The BNL solutions to each problem are presented in this report. Specific guidelines for comparing COL licensee results to these published results and acceptance criteria to be satisfied in order to demonstrate acceptability are also given.

2.0 PROJECT BACKGROUND

The PSAFE2 program is a full feature, elastic piping analysis code based on the finite element method. The program, a modified version of the general purpose computer program SAP IV, Reference 2, was developed by BNL to analyze piping systems subjected to both static and dynamic loading. Dynamic analysis capabilities include both response spectrum and time history analysis for systems subjected to either uniform or independent support motions.

The PSAFE2 program and its precursor EPIPE, Reference 3, have been extensively tested and verified against other piping programs and against physical test results. The programs have been applied to develop earlier NRC benchmark problem solutions to confirm the adequacy of programs used by nuclear power plant license applicants (References 4 and 5).

This report presents the solutions to piping benchmark problems with configurations that are representative of ABB/CE System 80+ piping systems. The solution methods that were applied were not in their entirety included in earlier NRC benchmark studies. They include the uniform response spectrum method with high frequency mode responses, the modal superposition time history analysis method, and the direct integration time history analysis method. The following section provides a brief description of the analytical methods.

2.1 Mathematical Background

Since elastic piping analysis is a well established procedure, only a brief outline of the theoretical considerations used in obtaining the dynamic solutions will be presented. A more detailed description of the analysis methods and solution schemes is given in Reference 2.

The analysis of a piping system is carried out by use of the stiffness matrix method, in which the piping is represented by a network of basic elements, straight and curved beams, and one-dimensional elements interconnected at the nodes. The dynamic response of the network is described mathematically by the equation of motion:

$$[M]\{\ddot{u}\} + [C]\{\dot{u}\} + [K]\{u\} = \{R(t)\}$$

where [M] is the mass matrix, [C] is the damping matrix, and [K] is the stiffness matrix of the element assemblage. The vectors {u}, {$\dot{u}$}, and {$\ddot{u}$} are the nodal displacements, velocities, and accelerations, respectively. {R(t)} can be a vector of time varying loads or of effective loads which result from ground motion. The PSAFE2 program can carry out time history or response spectrum analysis for the solution of this equation. A brief description of the methods used in these benchmark problem solutions is provided below.

2.1.1 Uniform Support Motion Response Spectrum Analysis

In the case of ground motion, if it is assumed that the piping system is uniformly subjected to the ground acceleration, $\ddot{u}_g$, the equations of motion can be expressed as follows:

$$[M]\{\ddot{u}_r\} + [C]\{\dot{u}_r\} + [K]\{u_r\} = -[M]\{\ddot{u}_g\}$$

where $\{u_r\}$ is the relative displacement of the system with respect to the ground, $\{u_r\} = \{u\} - \{u_g\}$.

The equations are then expanded in terms of the system modal matrix and generalized coordinates:

$$[M]\,[\phi]\,\{\ddot{q}\} + [C]\,[\phi]\,\{\dot{q}\} + [K]\,[\phi]\,\{q\} = -[M]\,\{\ddot{u}_g\}$$

where:

$[\phi]$ = *normalized modal matrix such that* $[\phi]^T[M][\phi] = [I]$

$\{q\}$ = *generalized coordinates vector.*

Multiplication by the transpose of the modal matrix yields:

$$\{\ddot{q}\} + [\Delta]\{\dot{q}\} + [\omega^2]\{q\} = -[\phi]^T[M]\{\ddot{u}_g\}$$

where:

$[\omega^2]$ = diagonal matrix of eigen-values

$[\Delta]$ = diagonal matrix of modal damping coefficients, where the damping is assumed to satisfy the modal orthogonality condition. This results in n uncoupled equations for the generalized coordinates.

The equation set can be solved for the maximum modal response for each system degree of freedom corresponding to excitation in each spatial direction as follows:

$$u_{m,n,i} = \frac{S_{n,i}}{\omega_n^2} \phi_{m,n} L_{n,i}$$

where:

$u_{m,n,i}$ = maximum displacement of mth degree of freedom in the nth mode due to excitation in the ith spatial direction

$S_{n,i}$ = value of spectral acceleration corresponding to frequency ω_n, and the i-th spatial direction input response spectrum

$L_{n,i}$ = modal participation factor for nth mode and ith spatial direction

ω_n = nth system natural frequency

$\phi_{m,n}$ = modal deflection of degree of freedom m in nth mode

m = degree of freedom index

n = modal index

i = spatial index

For the final solution, the maximum modal responses are combined over the first n modes up to the cutoff frequency (the lower frequency nodes) at which the spectral acceleration roughly returns to the zero period acceleration (ZPA). For the benchmark problem given in this report, the modal combination is performed in accordance with the grouping method as described in Section 1.2.1 of Regulatory Guide 1.92, Reference 6.

In some piping systems the responses of modes above the cutoff frequency (the high frequency modes) may have a significant effect on the total response, especially on support reactions. In order to ensure that these high frequency mode effects are accounted for, an additional calculational procedure based on the methodology described in Appendix A to Section 3.7.2 of the Standard Review Plan, Reference 7, was implemented. This procedure is as follows:

For each degree of freedom (DOF) included in the dynamic analysis, the fraction of DOF mass, d_i, included in the summation of all of the modes up to the cutoff frequency was calculated for each DOF as follows:

$$d_i = \sum_{n=1}^{N} L_n \times \phi_{n,i}$$

where:

n is order of the mode under consideration,

N is the number of modes up to the cutoff frequency,

$\phi_{n,i}$ is the nth natural mode of the system, and

L_n is the participation factor given by:

$$L_n = \frac{\{\phi_n\}^T\{1\}}{\{\phi_n\}^T[M]\ \{\phi_n\}}$$

The fraction of DOF mass not included in the summation of these modes, e_i, was then calculated as:

$$e_i = d_i - \delta_{ij}$$

where δ_{ij} is the Kronecker delta, which is one if DOF i is in the direction of the earthquake motion and zero if DOF i is a rotation or not in the direction of the earthquake input motion.

Since higher modes can be assumed to respond in phase with the ZPA and thus, with each other, these modes should be combined algebraically. This is equivalent to pseudostatic response to the inertial forces from these higher modes excited at the ZPA. These pseudostatic inertial forces for all higher modes for each DOF i are given by:

$$P_i = ZPA \times M_i \times e_i$$

where:

P_i is the force or moment to be applied to DOF i.

M_i is the mass or mass moment of inertia associated with DOF i.

In order to determine the maximum responses associated with the high frequency modes, a static analysis is performed by applying this set of pseudostatic inertial forces to all of the degrees of freedom in the model. The total high frequency mode responses are then combined by the square-root-of-sum-of-squares method with the total combined response from the lower-frequency modes to determine the overall piping system peak responses.

2.1.2 Modal Superposition Time History Analysis

The time history response of a piping system subjected to a known forcing function can be obtained by the modal superposition method. This procedure requires the solution of the generalized eigenvalue problem to determine the frequencies and mode shapes of the system. It uses the same modal transformation procedures described above for the response spectrum method. The general equations of motion in matrix form are expressed as follows:

$$[M]\{\ddot{u}\} + [C]\{\dot{u}\} + [K]\{u\} = \{R(t)\}$$

Applying the transformation:

$$\{u\} = [\phi]\{q\}$$

The equations can be expressed in terms of the generalized modal coordinates:

$$[M][\phi]\{\ddot{q}\} + [c][\phi]\{\dot{q}\} + [K][\phi]\{q\} = \{R(t)\}$$

Multiplication by the transpose of the modal matrix and application of the modal orthogonality assumptions yields the following set of equations:

$$\{\ddot{q}\} + [\Delta]\{\dot{q}\} + [\omega^2]\{q\} = [\phi]^T\{R(t)\}$$

This set of decoupled differential equations is solved numerically for a sufficient number of modes needed to adequately characterize the dynamic response of the piping system. In selecting the integration time step and the number of modes, the dynamic characteristics of the system as well as the forcing function must be considered. The PSAFE2 program uses the Wilson Θ numerical integration method which is an unconditionally stable step-by-step integration scheme. Finally, the modal responses are converted back to geometric coordinates u and combined algebraically at each time step to provide the total response of the piping system as a function of time.

2.1.3 Direct Integration Time History Analysis

In this solution mode the equation of motion is solved directly by numerical integration. Eigen value evaluations are not made and no simplification associated with eigen vector orthogonality properties is used. As such, no approximation associated with a modal assumption is introduced. The method is a basic approach and is described in any reference on numerical methods. References 2 and 3 are particularly applicable.

In the PSAFE2 program the Wilson Θ method is used to perform the numerical integration. The advantage of this method is that it is unconditionally stable. As a matter of good practice, the time step should be essentially 1/10 the shortest period of interest. In this method, Rayleigh damping is assumed such that the damping matrix is given by:

$$[C] = \alpha[M] + \beta[K]$$

Where α and β satisfy the following relation:

$$\xi_i = \frac{\alpha}{2\omega_i} + \beta\frac{\omega_i}{2}$$

where ξ_i is the modal damping ratio corresponding to natural frequency ω_i.

The α and β constants may be determined from the above relationship by assigning a prescribed modal damping ratio, ξ, to any two frequencies, ω_1 and ω_2 and solving the following set of simultaneous equations:

$$\xi = \frac{\alpha}{2\omega_1} + \beta\frac{\omega_1}{2}$$

$$\xi = \frac{\alpha}{2\omega_2} + \beta\frac{\omega_2}{2}$$

Once the α and β constants are established, the modal damping ratio, ξ_i, for each remaining mode of vibration with natural frequency, ω_i, is determined from the equation given above. Thus, the damping ratio is a function of frequency. This differs from

the modal analysis methods described above in which a constant damping ratio may be assigned to all modes. With Rayleigh damping, a plot of ξ versus ω shows modal damping to be lower than the prescribed value within the frequency range of interest between ω_1 and ω_2 (although the curve is relatively flat). Modal damping is higher at frequencies below and above this range.

In an analysis where a constant modal damping is required, (e.g., R.G. 1.61 damping) the analyst must exercise extreme caution and good engineering judgement in determining the α and β constants. The prescribed damping ratio should be assigned to the two frequencies that bound the significant frequency range. For example, the prescribed damping ratio may be assigned to the fundamental frequency and the ZPA frequency. This will ensure that all modes within the amplified range of response will have a modal damping value that is close to but does not exceed the prescribed value. Other values of ω_1 and ω_2 can be selected if appropriate justification is provided to ensure that the prescribed modal damping has been adequately approximated.

2.2 Input-Output Format

To facilitate proper use of the enclosed data a brief summary of the PSAFE2 input-output data lists will be presented. For a basic description of element properties, coordinates, etc., reference can be made to the earlier benchmark reports, References 4, 5, and 8.

The first page of each problem shows a table listing the significant parameters for the problem and the analysis options activated for the analysis. The number of element types is the number of boundary-spring element and pipe element groups used to define the model. The number of frequencies is the number of frequencies solved for in the eigen value routine and used in the subsequent response spectrum analyses. The interpretation of the various option flags is obvious, although not all of the options are used in the benchmark problems.

The next pages show the nodal point list. The column labeled old node is the label assigned the nodal point in the finite element model. The column labeled new mode is the sequential label assigned to the node within the program and used in all program algorithms. The boundary condition codes define the constraints imposed at the node, a "1" signifying that the degree of freedom is completely restrained while "0" or ("-0") signifies complete freedom. As indicated, each node potentially has six degrees of freedom, "X" signifying displacement in the X global direction and "XX" signifying rotation about the X global axis. The following nodal coordinates define the location of the node in the global coordinate system and are in inches. The last column designated "T" is the nodal temperature.

The next blocks of input information are the input element data lists. Since the system may be subdivided into groups of elements this data is entered group by group. The possible element types are spring elements, anchor movement elements, snubber elements, and pipe (either tangent or bend) elements. A single group is comprised of all pipe elements or all spring elements as intermixing element types within a group is not allowed.

For a typical pipe element group, the first page lists control information for the group, i.e., type of element, number of elements, etc. This is followed by a material properties table where on each line of this table are specified, the material identification number, the temperature for which the data applies and the corresponding modulus of elasticity, Poisson ratio and coefficient of thermal expansion. For cases where the variation of material properties with temperature are considered, the element temperature is the average of its bounding nodal temperatures and a linear variation of the input material properties data with temperature is assumed. Following this is the section properties table where all data entries are clearly labeled. Next, if appropriate, is a branch point list specifying the nodes where pipe runs intersect, followed on the same page by entries entitled, "Load Case Multipliers." These only apply to static analysis runs and may be ignored herein. The last and largest list in the group data is the element definition and connectivity table. Again, the columns in this table are clearly labeled. For the bend elements, two lines are shown. The pressure indicated on the first line is the value of pressure used in computation of the bend flexibility. The entries on the second lines are the bend radius, third point declarer and the X, Y, Z coordinates of the third point. If the third point declarer is "TT" the coordinates of the bend tangent intercept are listed, if "CC," the coordinates of the

bend center of curvature are listed. The columns entitled direction cosines, wall fraction and input tag may be ignored.

The group data list for boundary/spring elements or snubber elements is somewhat simpler. There is the element control information followed by element load case multipliers which again may be ignored. The element definition and connectivity list follows and is clearly labeled. The interpretation of the pertinent information in this table is as follows: support group number NG designates the excitation group to which the spring belongs; code KD and KR are spring type declarers where KD=1 signifies a linear spring while KR=1 signifies a rotational spring. The direction cosines listed define the line direction along or about which the spring acts in relation to the global axes. The specified displacement - rotation columns relate to imposed displacements and can be ignored. The last column lists the element spring rate in lb. per inch or inch lb. per radian.

The next table of input is labeled nodal loads. For the dynamic cases the table is a listing of all the concentrated masses, and the nodes at which they are located, acting on the system. A complete absence of this table indicates that there are no concentrated loads. The total mass used in each analysis is the sum of these quantities plus any distributed mass developed in the pipe elements. Distributed mass is developed in the pipe elements only if quantities appear in the columns entitled weight/unit length - mass/unit length in the pipe element section property tables.

The remaining input data describes the input response spectra or the time history forcing function, as appropriate. For a response spectrum case, the input spectra appear immediately after the output list of frequencies and modal participation factors. This data includes the direction weighting factors, a descriptive title and a table of the spectrum values given in "g's". If only one spectrum is provided it applies to all three directions as modified by the weighting factors. If two spectra are provided, the first applied only to the X direction while the second applies to the Y and Z directions. Intermediate values between data points are obtained by linear interpolation.

For a modal superposition time history case, the definition of the time history forcing functions follows after the output list of frequencies. This data is input by support groups and includes first a summary of control information specifying forcing function number, type and size, analysis time step, phasing (controlled by arrival times), duration and modal damping information (applies to all modes), and output print interval. This is followed by forcing function type, direction and arrival time declarers followed by the detailed definition of the forcing functions. The forcing function record is digitized and includes a listing of the time and corresponding function value for each point of the function definition and is preceded by scale factor, function number and heading information. The function value for intermediate times is derived by linear interpolation. Regarding arrival times, an arrival time of 0.0 connotates forcing function application at time equal to 0.0. This information is provided sequentially for each support group in the system and acts simultaneously on all supports within a group.

For the time history case, the nodal load table is followed by a page summarizing control information unique to the time history analysis. This includes a definition of the number of solution time steps, time step size and the values of the damping parameters α and β. The next table provides the definition of the points of application of the forcing functions, the degree of freedom they act in, function number and arrival (start) time declarers and the function multiplier. Regarding the function multiplier, it is the amount by which the forcing function is amplified for the listed nodal point, the amplification being constant for the duration of the forcing function. Two further listings complete the input. The first is a listing of the arrival times and the second, the listing of forcing functions. The forcing function listing includes the time and corresponding function value for each point of the function definition.

The output provides listings of all the pertinent results. For the response spectrum solutions these include the system natural frequencies, modal participation factors, global displacements/rotations of all nodal points and element forces/moments for all elements based on the sign convention shown in Figure 1. The displacement and force results are provided first for the lower frequency modes (amplified response), then for the higher frequency modes (rigid response), and lastly for the final results corresponding to SRSS combination of the response due to the lower frequency modes with the response due to the higher frequency modes. For the rigid response, the contribution to response for excitation in each of the coordinate directions is, in

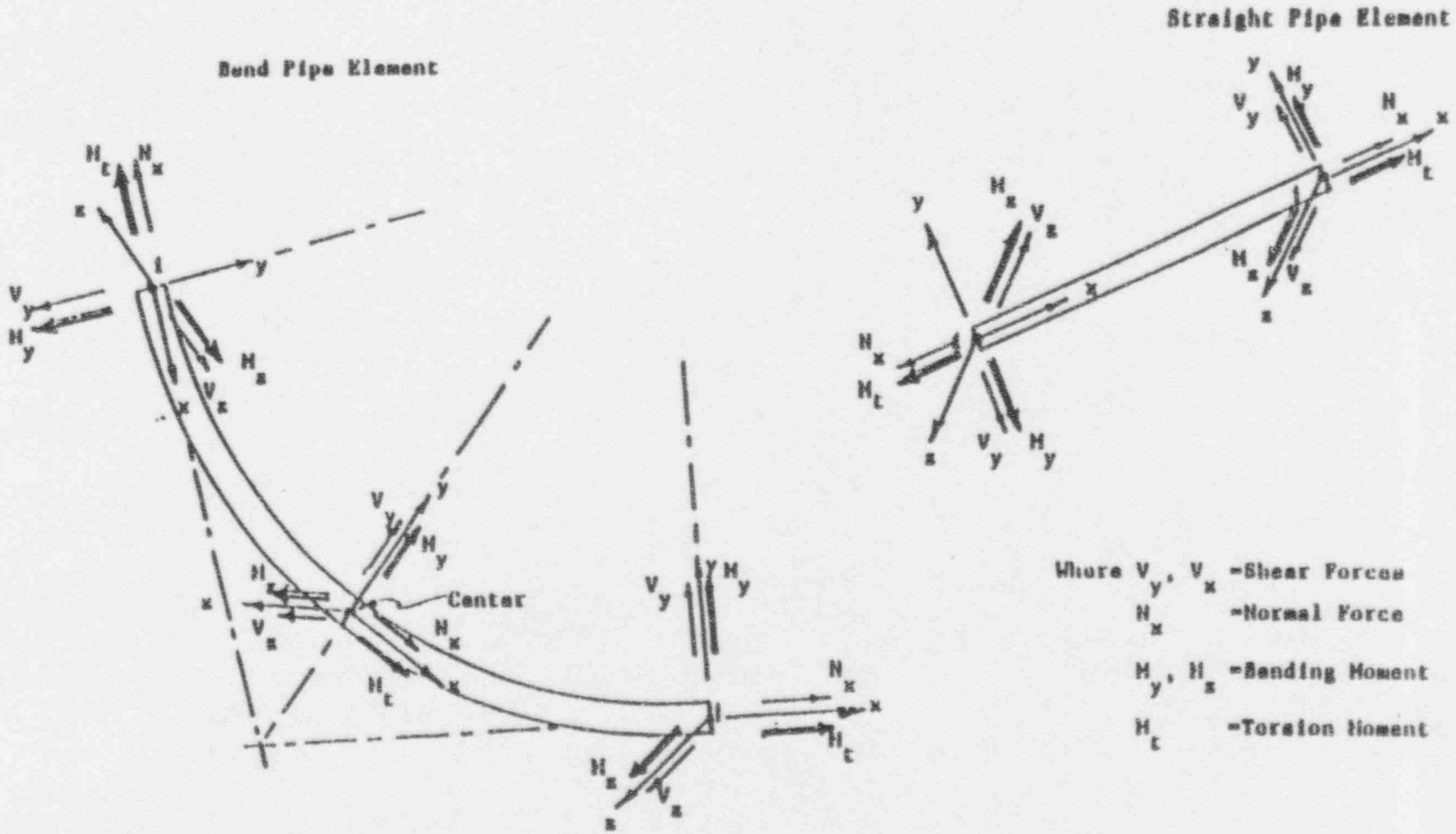


FIGURE 1 - SIGN CONVENTION FOR FORCES AND MOMENTS

fact, provided. These are labeled load cases 1, 2 and 3 corresponding to excitation in the X, Y, and Z directions respectively. These results are developed by static analyses and are combined by SRSS before combination with the amplified response. In effect, the rigid response is treated as an additional mode and summed with the other, lower frequency modes.

The time history output is simpler. It consists of three tables of maxima listed with their corresponding time at maxima. The first table is for nodal displacements with six displacement components for each node. The displacement component declarers have the following interpretation: 1, 2, and 3 are the translations of the node in the X, Y, and Z directions respectively while 4, 5, and 6 are the rotations of the node about the X, Y, and Z axis respectively. The next table provides the spring/boundary element force (labeled stress) maxima. A component declarer equal to one in this table indicates a force while the declarer equal to two indicates a moment. The last table provides the maxima for pipe element force components (labeled stress). For each element twelve components of force are listed; the first six corresponding to the i and the remaining six to the j end. The component declarers in this table have the following interpretations: 1, 2, and 3 / 7, 8, and 9 are the i end / j end forces in the element X, Y, and Z axes respectively while 4, 5, and 6 / 10, 11, and 12 are the i end / j end moments about the element X, Y, and Z axis respectively.

3.0 DESCRIPTION OF PIPING BENCHMARK PROBLEMS

For the System 80+ standardized design three piping benchmark problems involving two representative piping systems were developed. The first piping system is a section of the feedwater piping, while the second is the pressurizer surge line. These two systems were used by ABB/CE in sample analyses to demonstrate the analysis methodology proposed for design analysis of piping in the System 80+ design. The solutions developed represent analytical benchmarks for three analysis methods, the uniform support motion response spectrum method, the modal superposition time history analysis method and the direct integration time history analysis method. Only these methods are proposed for use in the design of piping in System 80+ and were demonstrated in the sample analyses. The COL licensee having demonstrated that the results developed for these problems are in agreement with the benchmark results will be entitled to use these methods in design analysis.

The computational options used in the benchmarks are considered acceptable. For the response spectrum method clustering between closely spaced modes in accordance with the grouping method as described in Section 1.2.1 of Regulatory Guide 1.92 and additions to account for high frequency modes per SRP 3.7.2 Appendix A, must be made. Interspatial combination using the SRSS method and any sequence in performing the combinations is acceptable.

No definition of acceptable combination procedures are required for the time history method. Good practice would require that the time step used be sufficiently small to provide good estimates of system response. One tenth the smallest period of interest is a recognized rule for time step size. In any case, having selected a time step, its adequacy should be demonstrated by showing that a reduction of time step size by a factor of two does not change the predicted response by more than 10%. This sensitivity to time step check was made in the time history benchmarks. For the modal superposition method a check to assure that a sufficient number of modes has been used to ensure participation of all significant modes must be made. The criterion for this check is specified in SRP 3.7.2 and requires that the inclusion of additional modes does not result in more than a 10% increase in response.

The listing of the output results for each problem is relatively complete. The greatest omission is the deletion of the digitized mode shape information for the response spectrum and modal superposition problems. The inclusion of this data would have resulted in a five fold increase in the size of this report. Further omissions are the calculations for high frequency effects in Problem 1. These are simple static analyses which can be performed in various ways. A full description of the format of the output is provided in the preceding section.

3.1 Benchmark Problem 1

The first System 80+ piping benchmark is a uniform support motion response spectrum solution for one section of the feedwater piping subjected to safe shutdown seismic loads. The piping system, shown in Figure 2, extends from two nozzles on steam generator 2 to an anchor at the main steam valve house wall (MSVH). It consists of two 20 inch (50 cm) diameter branch lines converging into a 24 inch (60 cm) diameter main line which expands into a 28 inch (70 cm) diameter line at the MSVH. The pipe is schedule 80, schedule 120 and special walled ASME SA106B carbon steel piping. Both the nozzles on the steam generator and the penetration at the MSVH wall are anchors for the system. The system is dynamically restrained by six rigid restraints in the vertical direction and six snubbers in the horizontal direction. The line includes two 20 inch diameter and five 24 inch diameter motor operated valves and two butt weld reducers. Nominal temperature and pressure for the line are 650°F (343°C) and 1200 psig (8274 kPa) respectively.

The finite element nodes and discretization are shown in Figure 2 while a computer generated isometric of the system is shown in Figure 3. The model consists of 70 pipe elements and 71 nodes. The anchors exist at nodes 1 and 14, the steam generator nozzles and node 71, the MSVH wall. Vertical restraints act at nodes 10, 26, 34, 44, 55 and 66 and horizontal snubbers restrain nodes 10, 25, 26, 34, 44 and 55. In the analyses the anchors are modeled as stiff springs (K=1E + 13 lb/in in translation and 1E + 15 in-lb/rad in rotation) in the six degree of freedom directions. The snubbers and vertical restraints are modeled as linear springs with spring constants consistent with their properties. The valves in the system are modeled with heavy walled (t = 10 inches) pipe elements and concentrated masses chosen to simulate valve

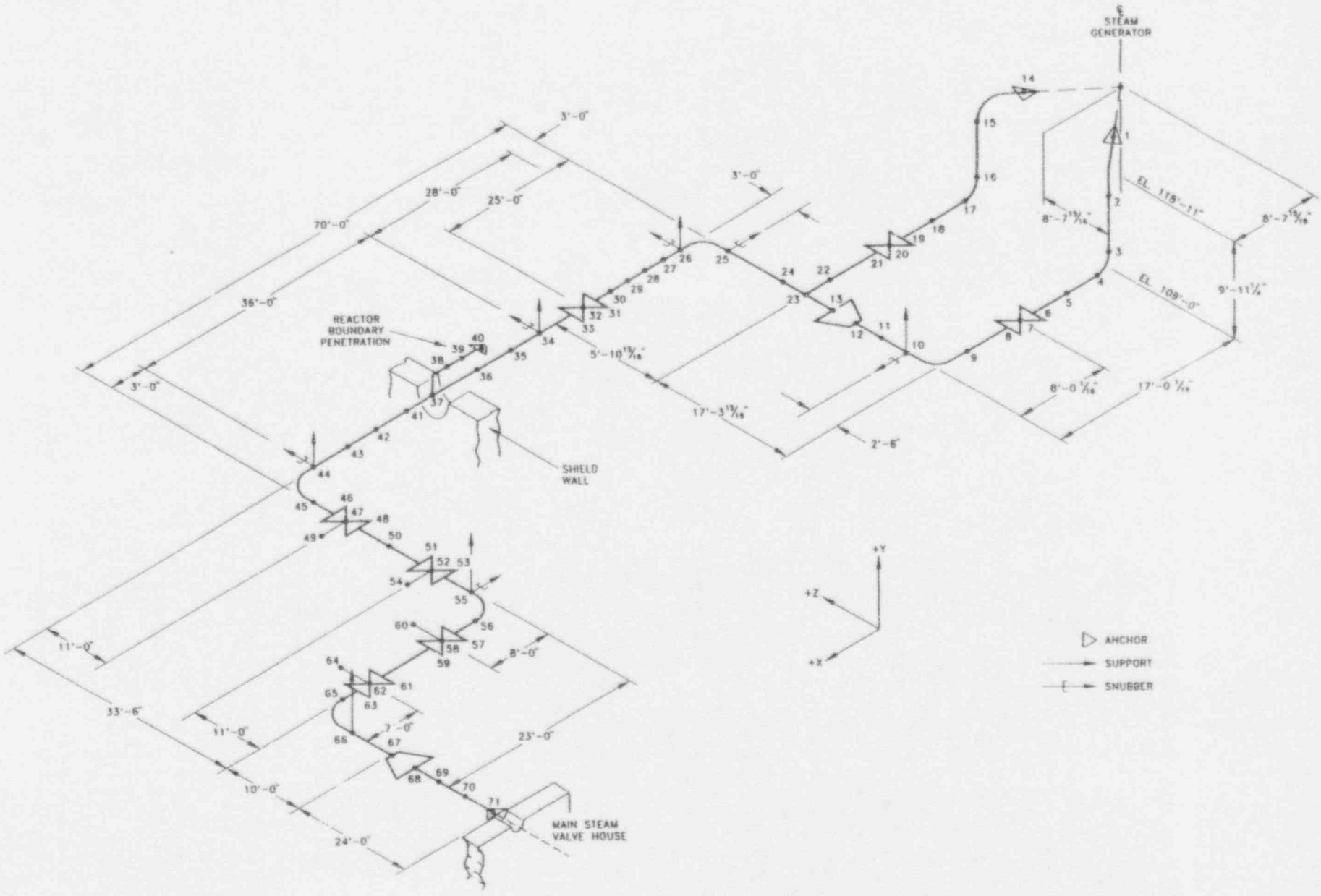


FIGURE 2 - FEEDWATER LINE

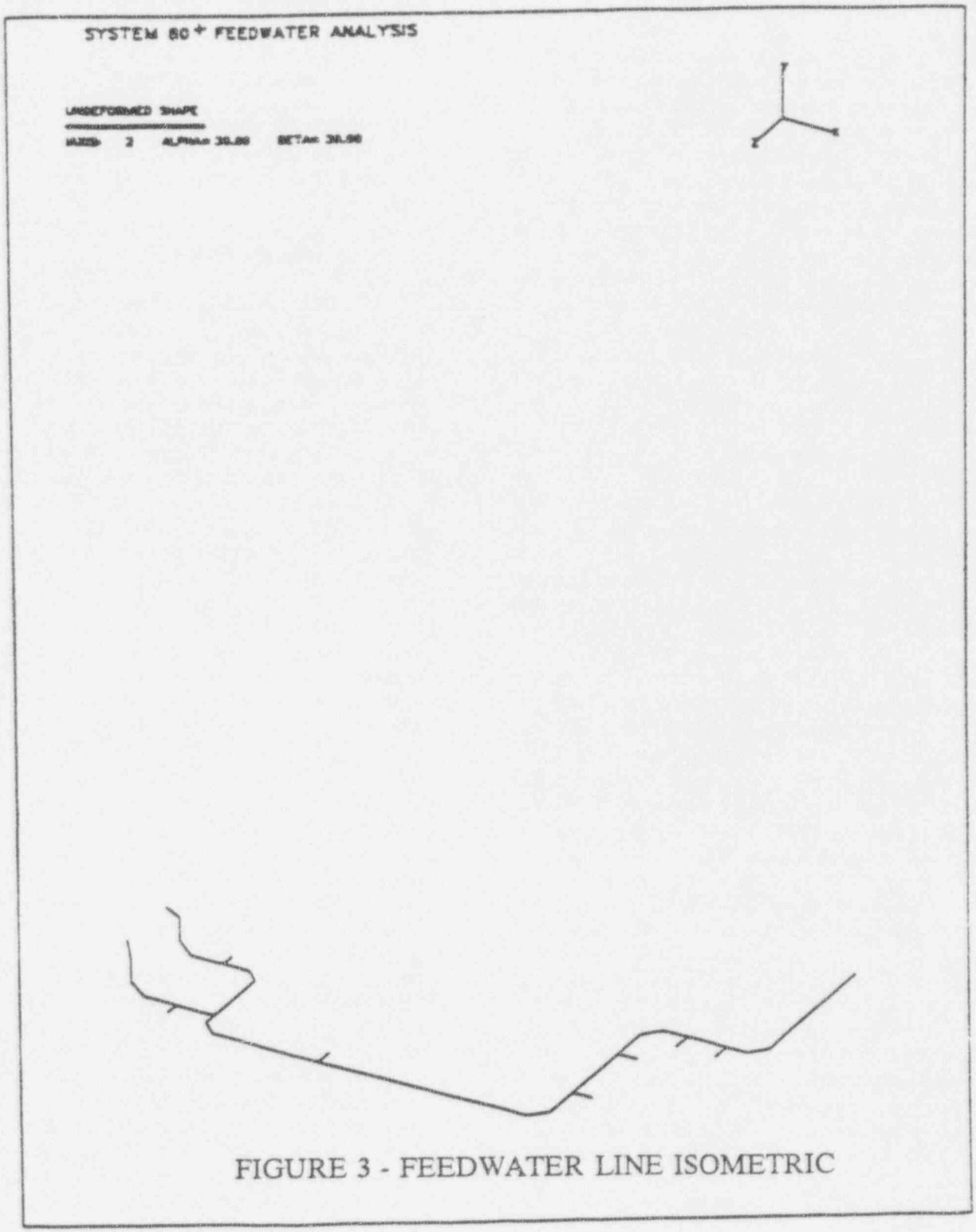


FIGURE 3 - FEEDWATER LINE ISOMETRIC

properties. All parameters relating to the model are specified in the included computer listing.

In the analysis a cutoff frequency of 40 Hz was used. A listing of the first 10 natural frequencies is presented in Table 1. Computer generated isometrics of the first four modes are shown in Figure 4. As stated, the loading function was the SSE. A digitization of the spectra is included in the input listing. In the calculation, combination between the low frequency (amplified) and high frequency (rigid) responses was made by the SRSS combination method. Listings of the low frequency, high frequency and total responses are presented in the output listings. In the analysis, interspatial combination was performed first using the SRSS method followed by a modal combination with the contribution of the high frequency modes being treated as an additional mode.

3.2 Benchmark Problem 2

The second System 80+ piping benchmark is a time history solution for the feedwater piping subjected to the transient loading induced by a water hammer. The piping and finite element model are identical to those used in Benchmark Problem 1 and the preceding section should be referred to.

In the analysis, the excitation consisted of eleven forcing functions acting on different nodes in the system. The loading essentially reproduces the effects of a water hammer shock wave traveling through the piping from the steam generator nozzles to the MSVH anchor. A full tabulation of the forcing functions digitized at 0.005 sec intervals is provided in the computer listing.

The solution is developed using the direct integration time history method of analysis with, in this case, a BNL version of the SAP V computer code. As stated, the listings of the input forcing functions are provided in the input listing. This list also provides a clear delineation of the nodal points on which the loads act, any weighting or scale factors associated with them, and their line direction of action. The solution time step was 0.001 sec. and the solution extended for 4000 time steps (4 sec). A reduction of time step to 0.0005 sec was found to change results by a factor less than 10% verifying the adequacy of the chosen size. The Rayleigh damping coefficients were taken as $\alpha = 0.0000377$ and $\beta = 0.00009549$ to be consistent with the ABB/CE application. All other pertinent parameters are identical to those used in the preceding problem and are specified in the input list.

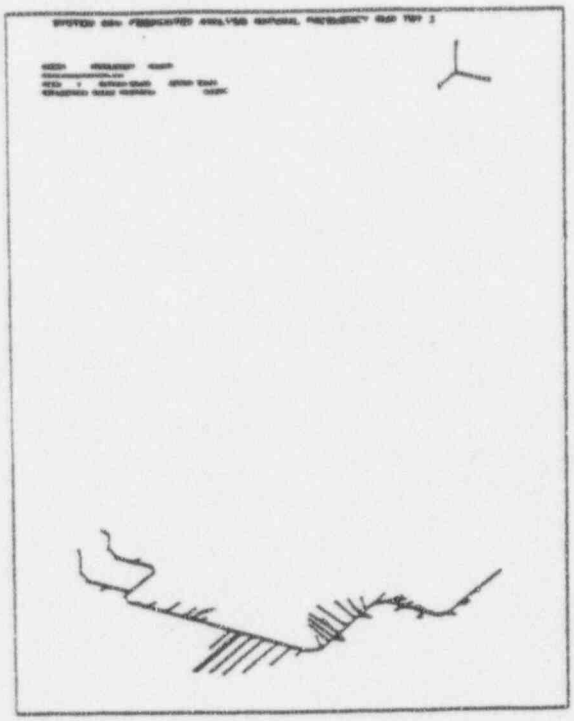
The output consists of the maxima and their time of occurrence for each response component. Although a more comprehensive tabulation of results would be desirable, the results provided are adequate for the benchmarking purpose. The tabulated outputs are well labeled and should be readily understood.

3.3 Benchmark Problem 3

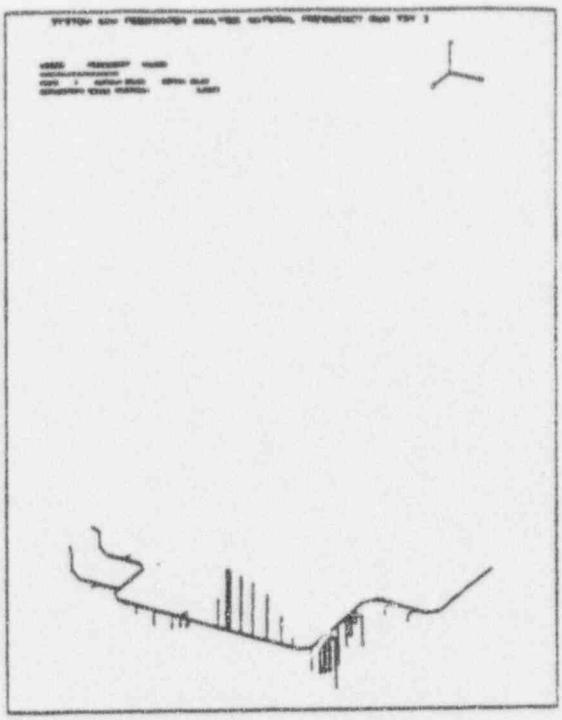
The third System 80+ piping benchmark is a time history solution of the pressurizer surge line subjected to the accelerations induced by a main steam line pipe break. The line, Figure 5, extends from a nozzle on the hot leg to a nozzle on the pressurizer. It is restrained in the horizontal directions by two rigid supports and one snubber. It is supported against dead weight and in the vertical direction with three constant force hangers. There are no valves or vertical dynamic restraints in the system. Nominal temperature and pressure for the line are 653°F (345°C) and 2250 psig (15514 Kpa).

The finite element nodes and discretization are shown on Figure 5 while a computer generated isometric of the system is shown in Figure 6. The model consists of 44 pipe elements and 45 nodes. Anchors exist at nodes 1 and 45, the two end points of the system. These were simulated in the analysis with stiff springs (K = 1E + 13 lb/in in translation and 1E + 15 in-lb/rad in rotation) in the six degree of freedom directions. The horizontal restraints act at nodes 19 and 23 while the lone snubber acts at node 7. Each of these elements was modeled with a linear spring with a stiffness consistent with their properties. No pipe supported equipment exists in the system. A full definition of all system parameters is provided in the input list.

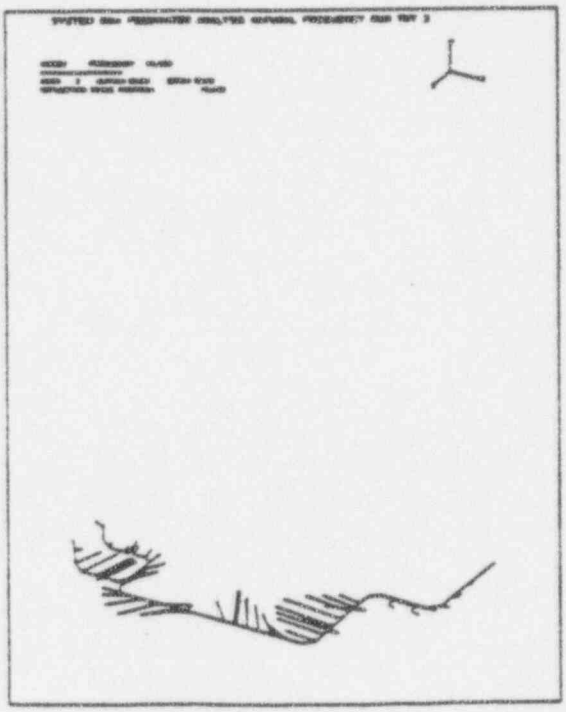
The solution is developed using the modal superposition time history method of analysis. The loading function is an acceleration in the three coordinate directions imposed on node 1, the pressurizer nozzle. A full digitized record of the forcing function is provided in the input list. In the analysis a cutoff frequency of 100 Hz was used resulting in a 27 mode modal approximation. A listing of the first ten natural frequencies is presented in Table 2. Computer generated



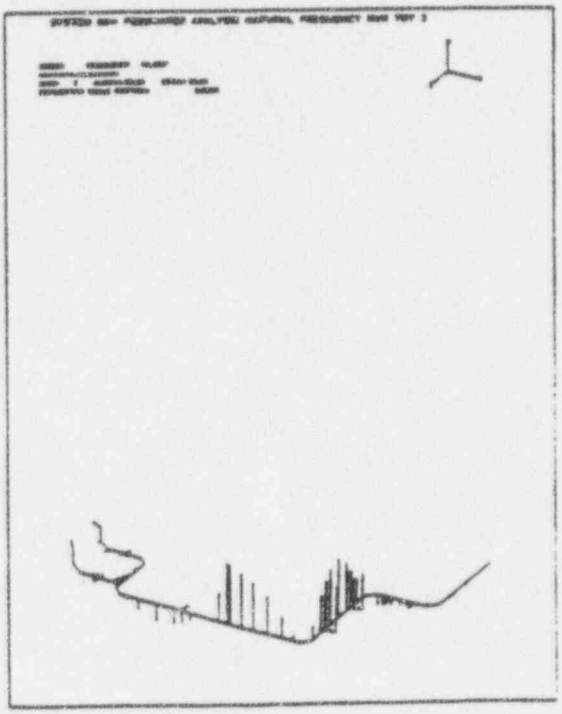
MODE 1



MODE 2



MODE 3



MODE 4

FIGURE 4 - FEEDWATER LINE MODE SHAPES

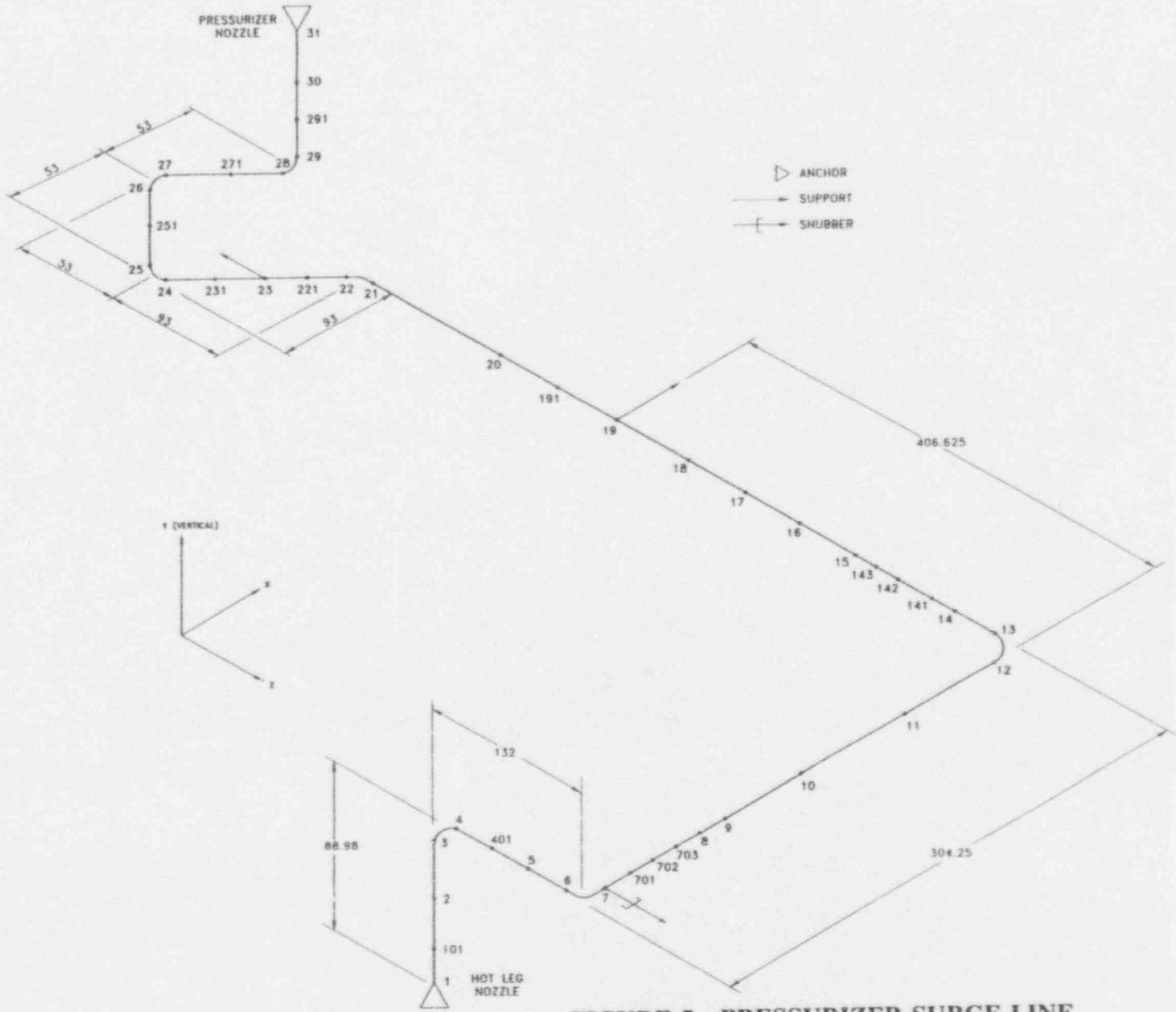


FIGURE 5 - PRESSURIZER SURGE LINE

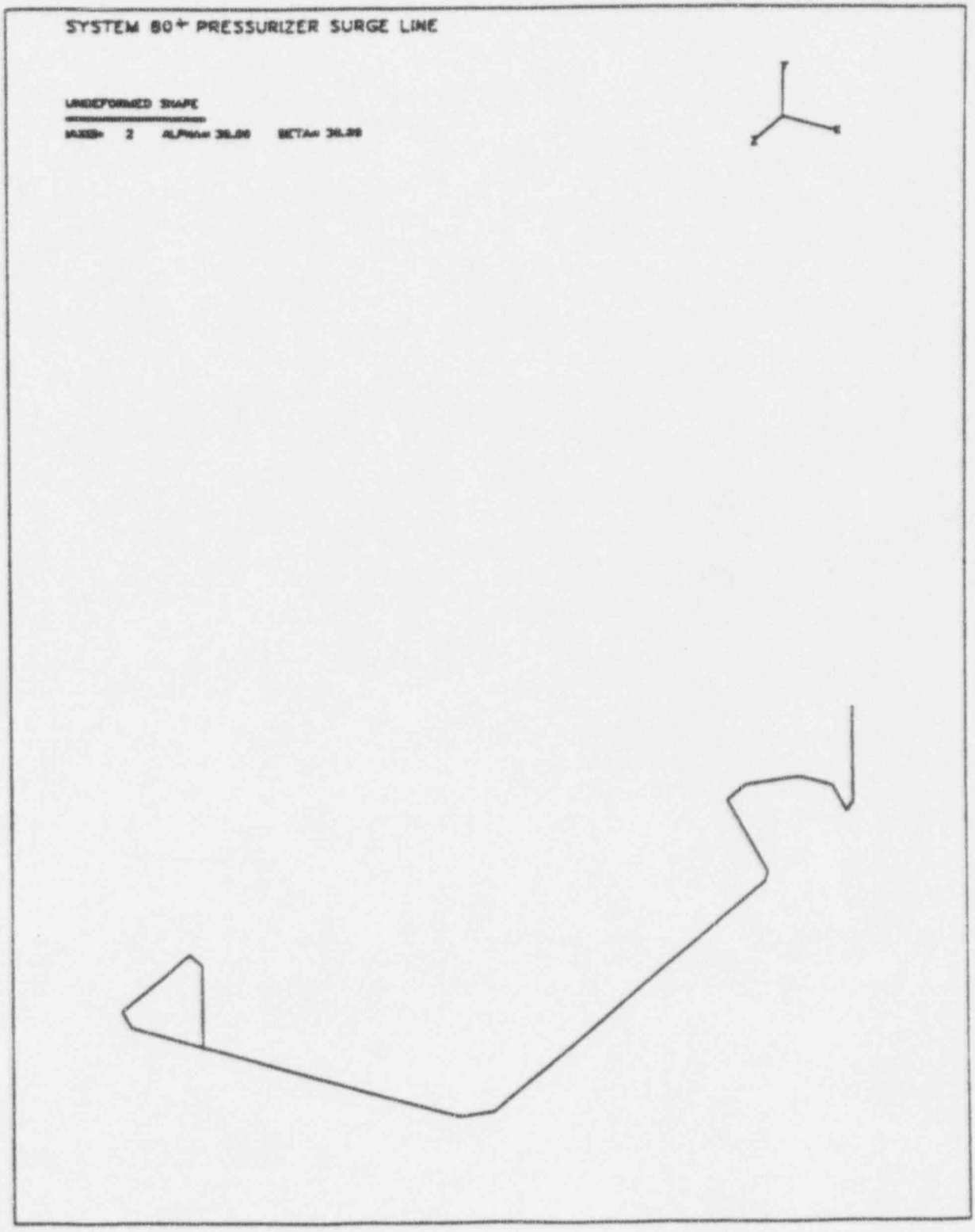
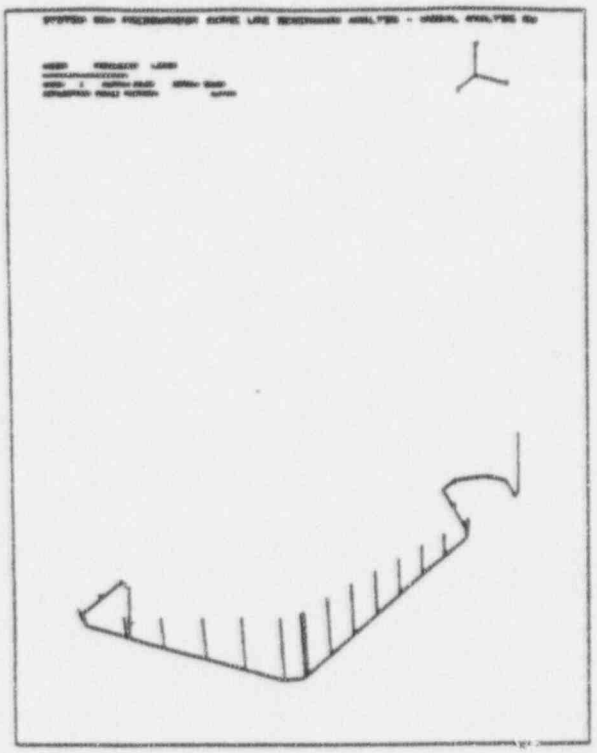
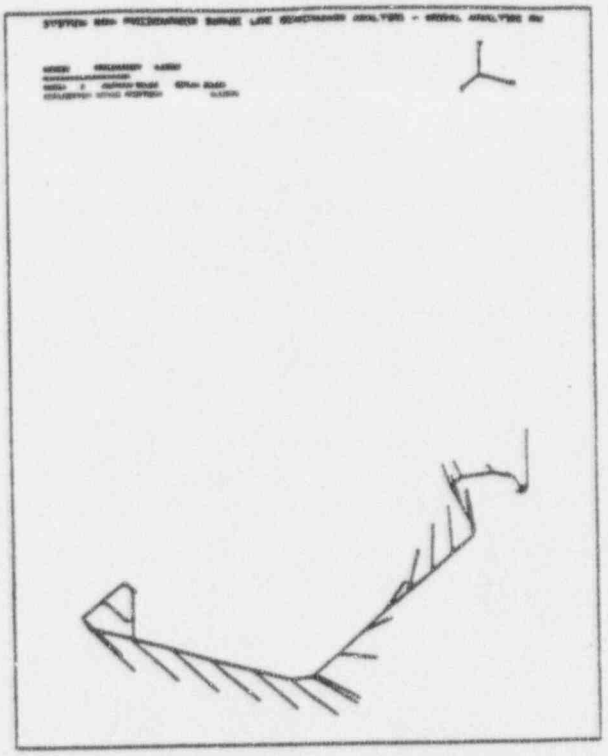


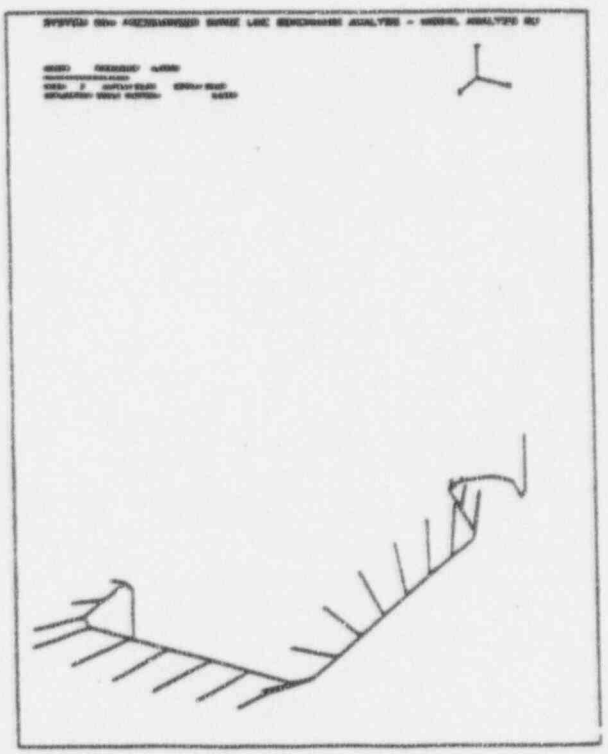
FIGURE 6 - PRESSURIZER SURGE LINE ISOMETRIC



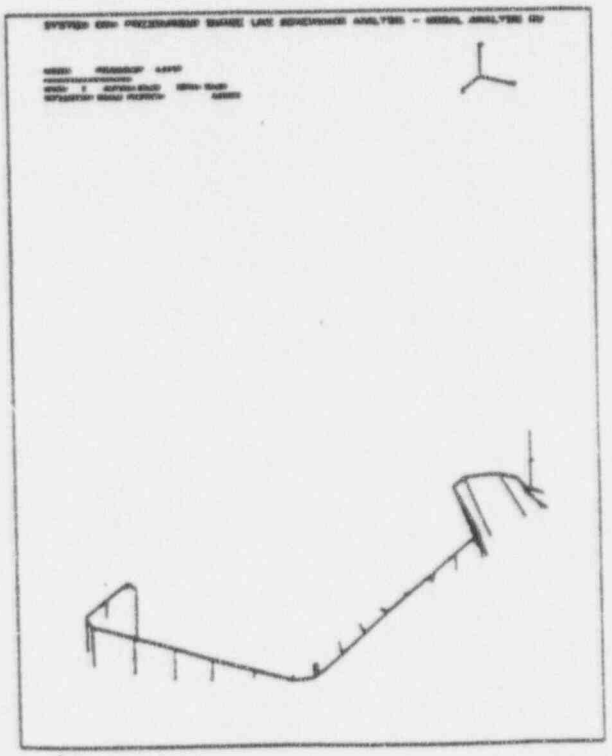
MODE 1



MODE 2



MODE 3



MODE 4

FIGURE 7 - PRESSURIZER SURGE LINE MODE SHAPES

TABLE 1

FEEDWATER PIPING MODAL ANALYSIS RESULTS

MODE NO.	FREQUENCY (CPS)	MODE DOMINANT DIRECTION
1	9.158	Y
2	9.429	X, Z
3	10.870	X, Z
4	10.893	Y
5	12.815	Z
6	14.139	X, Z
7	19.342	X, Z
8	19.781	Z
9	19.814	Y, Z
10	20.380	X, Y, Z

TABLE 2

PRESSURIZER SURGE LINE MODAL ANALYSIS RESULTS

MODE NO.	FREQUENCY (CPS)	MODE DOMINANT DIRECTION
1	1.312	Y
2	4.307	X
3	4.757	X
4	6.820	X, Y, Z
5	8.550	X, Y
6	12.637	Z
7	13.883	X, Z
8	14.667	X
9	15.837	X, Y
10	19.972	Y,Z

isometrics of the first four modes are shown in Figure 7. A listing of modal participation factors corresponding to uniform support excitations, developed in a different analysis of the system, is provided in the computer list for model verification purposes. Damping was taken as a uniform 2% of critical for all modes. The solution time step was 0.0001 sec for a total duration of one second ($\approx$ 10,000 time steps).

The output results again consist of the response maxima and their times of occurrence for each response component. In this case, however, the maxima were based on a sampling at every tenth time step. That is only the response at every tenth time step or 0.001 secs was compared to determine the maxima. If a finer sampling rate is used, the times of maxima occurrence and in fact the magnitudes of maxima will change. This sampling rate was selected to be consistent with the sampling rate used by ABB/CE in their solution for this problem. For the benchmarking purpose the prediction of comparable results for the same sampling frequency will be adequate.

Further, regarding this benchmark it should be realized that the solution represents only the inertial component of response. For a complete evaluation the response due to the time varying displacements of the anchor/support points must be evaluated and added to the inertial response to obtain total response.

4.0 BENCHMARK ACCEPTANCE CRITERIA

Earlier NRC benchmark reports provided comprehensive descriptions of the benchmark problem inputs and results but did not provide any definition of the acceptance criteria used to judge adequacy. Instead, the results of a benchmarking effort were submitted to the staff for evaluation on a case-by-case basis. This procedure was followed for most of the "work horse" computer codes then used by industry to qualify piping, including PISYS, ADLPIPE, WECAN, PISTAR, NUPIPE, SUPERPIPE, and PIPSYS.

For the System 80+ standard design benchmarks it was considered to be more appropriate to specify the acceptance criteria to be met. This will allow the COL licensee to assess the adequacy of his methods as the benchmark solutions are developed; precluding the striving for "perfect" results and flagging early on, analysis methods that are deficient. When successful, the COL licensee will simply have to retain an auditable record of the benchmarking effort to verify the adequacy of the methods to be used to qualify piping.

For the acceptance criteria, maximum allowed differences, expressed as a percent, rather than specific values, are specified and a summary of the criteria is presented in Table 3. As can be seen, the criteria is different for each response parameter, ranging from 2% for every natural frequency, to 10% for maximum displacements. Comparisons are required to be made for all natural frequencies and support reaction forces, but for only the maximum displacements and pipe moments in the designated pipe segments given in Table 4. The percentage differences are given by 100 (PE-BE)/BE, where PE is the predicted value, and BE is the benchmark value, for a specific response.

Comparisons are required to be made for every natural frequency and every component of support reaction. Regarding natural frequencies, these are fundamental characteristics of a system, and if they are not predicted accurately there is little possibility that correct estimates of system response can be developed. Consequently, the requirement to compare all frequencies to a tight tolerance was specified. Support reactions on the other hand are not fundamental characteristics of a system, but unlike pipe moments and forces, every component of reaction is used explicitly in the design process. That is, supports and anchors are typically designed individually for the specific loads they will carry with only a small level of conservatism. Consequently, it is important to provide reasonably accurate estimates of all reactions and the benchmarking requirement was set accordingly.

For pipe displacements and moments, only comparisons of maximum values are required. This is again consistent with the design/qualification process where only the maximum values impact on design. These comparisons are required to be made in each unique section of pipe for each problem. This was specified to assure that reasonably accurate estimates of all system responses was being made rather than good estimates for only a local region. The accuracy tolerances specified denote the relative importance assigned these parameters.

Again, reflecting design practice, some relaxation of criteria is allowed for pipe moments. Specifically, for these, if the estimates of the maximum components of moment do not meet criteria, comparisons can be made to the resultant moment at each location of maxima, and if these meet criteria, the benchmarking is acceptable. This reflects design practice in that it is only the resultant moments that enter into the qualification evaluations.

Finally, it is recognized that the benchmarking effort may not be clean cut in every application. Candidate analysis methodologies may not meet criteria for every parameter for all comparisons. In these instances, the COL licensee must interact with the staff providing additional justifications for acceptance. These applications will be assessed on a case-by-case basis.

TABLE 3

ACCEPTANCE CRITERIA

PARAMETER	CRITERIA	COMMENTS
Natural Frequencies	2%	All natural frequencies up to cutoff frequency.
Maximum Displacements	10%	Comparison to be made for maximum nodal translation* in each global coordinate direction for each segment** of piping.
Maximum Pipe Moments	5%	Comparison to be made for maximum element moment* about each local coordinate axis for each pipe segment**. Failure to meet criteria is acceptable if SRSS of three components at each point of maxima meet the criteria.
Support Reaction	10%	Comparison to be made for each component of force and moment for each support and anchor.

* Maxima for each direction not necessarily at same point.
** Pipe segments defined in Table 4.

TABLE 4

PIPING SEGMENTS

A. FEEDWATER LINE	
SEGMENT	NODE NUMBERS
1	1-10
2	10-26
3	26-34
4	34-44
5	44-55
6	55-66
7	66-71
B. PRESSURIZER SURGE LINE	
SEGMENT	NODE NUMBERS
1	1-7
2	7-19
3	19-23
4	23-31

5.0 CONCLUSION

Three benchmark problems have been developed for the purpose of assessing the adequacy of the analysis techniques that will be used by COL licensees to qualify piping for the System 80+ standardized plant. If a COL licensee can demonstrate that a candidate analysis methodology provides solutions to the benchmark problems that meet all acceptance criteria, the COL licensee may use that methodology for piping design without further approval. In that instance the COL licensee must submit documentation to the staff of the benchmarking effort in sufficient detail to support the conclusion.

In the event that the benchmarking is essentially, but not wholly successful, the COL licensee may petition for staff approval on a case-by-case basis. In these instances, the documentation of the benchmarking must be augmented with additional justifications of adequacy and the use of the methodology must await staff approval.

6.0 REFERENCES

1. 10CFR, Office of Federal Register National Archives and Research Administration, "Code of Federal Regulations," Title 10, Part 52, (54 FR 15386), May 1989.

2. Bathe, J.K., Wilson, E.L., Peterson, F.E., "SAP IV-A Structural Analysis Program for Static and Dynamic Responses of Linear Systems," Report No. EERC 73-11, University of California, Berkeley, CA, 1973.

3. Subudhi, M., Bezler, P., "EPIPE, Piping Analysis Program User's Manual -Version 1981," BNL NUREG/30784, December 1981.

4. Bezler, P., Hartzman, M., Reich, M., "Piping Benchmark Problems," NUREG/CR-1677, August 1980.

5. Bezler, P., Subudhi, M., Hartzman, M., "Piping Benchmark Problems," NUREG/CR-1677, Vol. II, August 1985.

6. Regulatory Guide 1.92, "Combining Modal Responses and Spatial Components in Seismic Response Analysis," Revision 1, February 1976.

7. U.S. Nuclear Regulatory Commission, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants," Section 3.7.2, 1989.

8. Bezler, P., Gardner, D., Hartzman, M., "A Dynamic Benchmark Solution for a Hypothetical Reactor System," BNL-NUREG-23645, December 1977.

APPENDIX A

UNITS OF MEASURE

The attached computer input and output data is presented in the following units of measure:

Length	-	inches (in)
Angular rotation	-	radians (rad)
Force	-	pounds (lb)
Moment	-	in-lbs.
Time	-	seconds (sec)
Pressure	-	lbs./in^2 (psi)
Acceleration	-	g's (in/sec^2/gravitational constant)
Frequency	-	Hertz (Hz) or cycles per second, cps
Temperature	-	degrees Fahrenheit (°F)

BENCHMARK PROBLEM 1

UNIFORM SUPPORT MOTION RESPONSE SPECTRUM ANALYSIS

SYSTEM 80+ FEEDWATER PIPING,BENCHMARK PROBLEM 1, UNIFORM SUPPORT MOTION

C O N T R O L I N F O R M A T I O N

```
NUMBER OF NODAL POINTS                =   71
NUMBER OF ELEMENT TYPES               =    2
NUMBER OF STATIC LOAD CASES           =    0
NUMBER OF DYNAMIC LOAD CASES          =    1
NUMBER OF ANCHOR MVMT CASES           =    0
NUMBER OF FREQUENCIES                 =   30
SOLUTION MODE (MODEX)                 =    0
  EQ.0,  EXECUTION
  EQ.1,  DATA CHECK
STRESS CALCULATION FLAG               =    0
   EQ.0 NO
   EQ.1 YES
ASME CODE EVALUATION FLAG             =    0
   EQ.1  CLASS 1 PIPING
   EQ.2  CLASS2 OR CLASS 3 PIPING
ACCELERATION DUE TO GRAVITY           =386.4
BANDWIDTH MINIMIZATION FLAG           =    0
   EQ.0  NO
   EQ.1  YES
ARBITRARY NODE NUMBERING FLAG         =    1
   EQ.0  NO
   EQ.1  YES
NUMBER OF SUPPORT GROUPS              =    0
FLAG FOR NODAL COORD. INPUT UNITS=    0
   EQ.0  CONSISTENT UNIT
   EQ.1  FEET TO INCHES
```


LIST OF ANALYSIS TO BE PERFORMED

LOAD CASE	DISK FILE	ANALYSIS TYPE
1	0	UNIFORM RESPONSE SPECTRUM ANAL.

NODAL POINT INPUT DATA

NEW NODE	OLD NODE	BOUNDARY CONDITION CODES X	Y	Z	XX	YY	ZZ	NODAL POINT COORDINATES X	Y	Z	T
1	1	0	0	0	0	0	0	82.724	1427.250	-82.724	570.000
2	2	0	0	0	0	0	0	103.940	1397.250	-103.940	570.000
3	3	0	0	0	0	0	0	103.940	1338.000	-103.940	570.000
4	4	0	0	0	0	0	0	133.940	1308.000	-103.940	570.000
5	5	0	0	0	0	0	0	163.940	1308.000	-103.940	570.000
6	6	0	0	0	0	0	0	193.940	1308.000	-103.940	570.000
7	7	0	0	0	0	0	0	211.940	1308.000	-103.940	570.000
8	8	0	0	0	0	0	0	229.940	1308.000	-103.940	570.000
9	9	0	0	0	0	0	0	278.000	1308.000	-103.940	570.000
10	10	0	0	0	0	0	0	308.000	1308.000	-73.940	570.000
11	11	0	0	0	0	0	0	308.000	1308.000	-3.500	570.000
12	12	0	0	0	0	0	0	308.000	1308.000	66.940	570.000
13	13	0	0	0	0	0	0	308.000	1308.000	86.928	570.000
14	14	0	0	0	0	0	0	82.724	1427.250	82.724	570.000
15	15	0	0	0	0	0	0	103.940	1397.250	103.940	570.000
16	16	0	0	0	0	0	0	103.940	1338.000	103.940	570.000
17	17	0	0	0	0	0	0	133.940	1308.000	103.940	570.000
18	18	0	0	0	0	0	0	163.940	1308.000	103.940	570.000
19	19	0	0	0	0	0	0	193.940	1308.000	103.940	570.000
20	20	0	0	0	0	0	0	211.940	1308.000	103.940	570.000
21	21	0	0	0	0	0	0	229.940	1308.000	103.940	570.000
22	22	0	0	0	0	0	0	290.996	1308.000	103.940	570.000
23	23	0	0	0	0	0	0	308.000	1308.000	103.940	570.000
24	24	0	0	0	0	0	0	308.000	1308.000	120.940	570.000
25	25	0	0	0	0	0	0	308.000	1308.000	138.000	570.000
26	26	0	0	0	0	0	0	344.000	1308.000	174.000	570.000
27	27	0	0	0	0	0	0	393.000	1308.000	174.000	570.000
28	28	0	0	0	0	0	0	440.000	1308.000	174.000	570.000
29	29	0	0	0	0	0	0	487.000	1308.000	174.000	570.000
30	30	0	0	0	0	0	0	534.000	1308.000	174.000	570.000
31	31	0	0	0	0	0	0	581.000	1308.000	174.000	570.000
32	32	0	0	0	0	0	0	608.000	1308.000	174.000	570.000
33	33	0	0	0	0	0	0	635.000	1308.000	174.000	570.000
34	34	0	0	0	0	0	0	680.000	1308.000	174.000	570.000
35	35	0	0	0	0	0	0	776.000	1308.000	174.000	570.000
36	36	0	0	0	0	0	0	872.000	1308.000	174.000	570.000
37	37	0	0	0	0	0	0	920.444	1308.000	174.000	570.000
38	38	0	0	0	0	0	0	870.444	1308.000	174.000	570.000
39	39	0	0	0	0	0	0	824.444	1308.000	174.000	570.000
40	40	0	0	0	0	0	0	812.444	1308.000	174.000	570.000
41	41	0	0	0	0	0	0	980.000	1308.000	174.000	570.000
42	42	0	0	0	0	0	0	1040.000	1308.000	174.000	570.000
43	43	0	0	0	0	0	0	1088.000	1308.000	174.000	570.000
44	44	0	0	0	0	0	0	1112.000	1308.000	174.000	570.000
45	45	0	0	0	0	0	0	1148.000	1308.000	138.000	570.000
46	46	0	0	0	0	0	0	1148.000	1308.000	69.000	570.000
47	47	0	0	0	0	0	0	1148.000	1308.000	42.000	570.000
48	48	0	0	0	0	0	0	1148.000	1308.000	15.000	570.000
49	49	0	0	0	0	0	0	1184.000	1308.000	42.000	570.000
50	50	0	0	0	0	0	0	1148.000	1308.000	-57.000	570.000
51	51	0	0	0	0	0	0	1148.000	1308.000	-129.000	570.000
52	52	0	0	0	0	0	0	1148.000	1308.000	-156.000	570.000
53	53	0	0	0	0	0	0	1148.000	1308.000	-183.000	570.000
54	54	0	0	0	0	0	0	1184.000	1308.000	-156.000	570.000
55	55	0	0	0	0	0	0	1148.000	1308.000	-252.000	570.000
56	56	0	0	0	0	0	0	1184.000	1308.000	-288.000	570.000
57	57	0	0	0	0	0	0	1217.000	1308.000	-288.000	570.000
58	58	0	0	0	0	0	0	1244.000	1308.000	-288.000	570.000
59	59	0	0	0	0	0	0	1271.000	1308.000	-288.000	570.000
60	60	0	0	0	0	0	0	1244.000	1308.000	-252.000	570.000
61	61	0	0	0	0	0	0	1313.000	1308.000	-288.000	570.000
62	62	0	0	0	0	0	0	1340.000	1308.000	-288.000	570.000

63	63	0	0	0	0	0	0	1367.000	1308.000	-288.000	570.000
64	64	0	0	0	0	0	0	1340.000	1308.000	-252.000	570.000
65	65	0	0	0	0	0	0	1388.000	1308.000	-288.000	570.000
66	66	0	0	0	0	0	0	1424.000	1308.000	-324.000	570.000
67	67	0	0	0	0	0	0	1424.000	1308.000	-408.000	570.000
68	68	0	0	0	0	0	0	1424.000	1308.000	-432.000	570.000
69	69	0	0	0	0	0	0	1424.000	1308.000	-520.000	570.000
70	70	0	0	0	0	0	0	1424.000	1308.000	-608.000	570.000
71	71	0	0	0	0	0	0	1424.000	1308.000	-696.000	570.000

S P R I N G E L E M E N T S

ELEMENT TYPE = 1
NUMBER OF ELEMENTS = 33

ELEMENT LOAD CASE MULTIPLIERS

CASE(A)	CASE(B)	CASE(C)	CASE(D)
1.0000	1.0000	1.0000	1.0000

ELEMENT NUMBER	NODE (N)	SUPPORT GROUP	CODE KD	CODE KR	DIRECTION COSINES WRT GLOBAL AXES X-	Y-	Z-	SPECIFIED DISPLACEMENT	SPECIFIED ROTATION	SPRING RATE
1	1	1	1	0	1.000	.000	.000	.000	.000	1.0000E+13
2	1	1	1	0	.000	1.000	.000	.000	.000	1.0000E+13
3	1	1	1	0	.000	.000	1.000	.000	.000	1.0000E+13
4	1	1	0	1	1.000	.000	.000	.000	.000	1.0000E+15
5	1	1	0	1	.000	1.000	.000	.000	.000	1.0000E+15
6	1	1	0	1	.000	.000	1.000	.000	.000	1.0000E+15
7	10	1	1	0	1.000	.000	.000	.000	.000	1.0000E+13
8	10	1	1	0	.000	1.000	.000	.000	.000	1.0000E+13
9	14	1	1	0	1.000	.000	.000	.000	.000	1.0000E+13
10	14	1	1	0	.000	1.000	.000	.000	.000	1.0000E+13
11	14	1	1	0	.000	.000	1.000	.000	.000	1.0000E+13
12	14	1	0	1	1.000	.000	.000	.000	.000	1.0000E+15
13	14	1	0	1	.000	1.000	.000	.000	.000	1.0000E+15
14	14	1	0	1	.000	.000	1.000	.000	.000	1.0000E+15
15	25	1	1	0	1.000	.000	.000	.000	.000	1.0000E+13
16	26	1	1	0	.000	1.000	.000	.000	.000	1.0000E+13
17	26	1	1	0	.000	.000	1.000	.000	.000	1.0000E+13
18	34	1	1	0	.000	1.000	.000	.000	.000	1.0000E+13
19	34	1	1	0	.000	.000	1.000	.000	.000	1.0000E+13
20	40	1	1	0	1.000	.000	.000	.000	.000	1.1250E+03
21	40	1	1	0	.000	1.000	.000	.000	.000	2.6500E+02
22	40	1	1	0	.000	.000	1.000	.000	.000	2.6500E+02
23	44	1	1	0	.000	1.000	.000	.000	.000	1.0000E+13
24	44	1	1	0	.000	.000	1.000	.000	.000	1.0000E+13
25	55	1	1	0	1.000	.000	.000	.000	.000	1.0000E+13
26	55	1	1	0	.000	1.000	.000	.000	.000	1.0000E+13
27	66	1	1	0	.000	1.000	.000	.000	.000	1.0000E+13
28	71	1	1	0	1.000	.000	.000	.000	.000	1.0000E+13
29	71	1	1	0	.000	1.000	.000	.000	.000	1.0000E+13
30	71	1	1	0	.000	.000	1.000	.000	.000	1.0000E+13
31	71	1	0	1	1.000	.000	.000	.000	.000	1.0000E+15
32	71	1	0	1	.000	1.000	.000	.000	.000	1.0000E+15
33	71	1	0	1	.000	.000	1.000	.000	.000	1.0000E+15

P I P E E L E M E N T I N P U T D A T A

C O N T R O L I N F O R M A T I O N

NUMBER OF PIPE ELEMENTS	=	70
NUMBER OF MATERIAL SETS	=	1
MAXIMUM NUMBER OF MATERIAL TEMPERATURE INPUT POINTS	=	2
NUMBER OF SECTION PROPERTY SETS	=	11
NUMBER OF BRANCH POINT NODES	=	2
MAXIMUM NUMBER OF TANGENTS COMMON TO A BRANCH POINT	=	3
FLAG FOR NEGLECTING AXIAL DEFORMATIONS IN BEND ELEMENTS (EQ.1, NEGLECT)	=	0

M A T E R I A L P R O P E R T Y T A B L E S

MATERIAL NUMBER = (1)
NUMBER OF
TEMPERATURE POINTS = (2)
IDENTIFICATION = (SA106 B

POINT NUMBER	TEMPERATURE	YOUNG'S MODULUS	POISSON'S RATIO	THERMAL EXPANSION
1	70.00	2.950E+07	.300	5.600E-06
2	651.00	2.610E+07	.300	8.700E-06

SECTION PROPERTY TABLE

SECTION NUMBER	OUTSIDE DIAMETER	WALL THICKNESS	SHAPE FACTOR FOR SHEAR	WEIGHT/ UNIT LENGTH	MASS/ UNIT LENGTH	DESCRIPTION
1	20.000	1.0310	.0000	2.8977E+01	7.4994E-02	20S80
2	24.000	1.2180	.0000	4.0750E+01	1.0546E-01	24S80
3	24.000	1.8120	.0000	5.0428E+01	1.3051E-01	24S120
4	28.000	2.0000	.0000	3.1694E+01	8.2024E-02	28SPEC
5	33.000	1.5000	.0000	4.2053E+01	1.0883E-01	30ID
6	22.062	2.0620	.0000	8.3333E+01	2.1567E-01	20S80 VLVE
7	26.436	2.4360	.0000	7.4070E+01	1.9169E-01	24S80 VLVE
8	27.624	3.6240	.0000	7.4070E+01	1.9169E-01	24S120 VLVE
9	27.600	10.0000	.0000	0.0000E+00	0.0000E+00	VLOP
10	22.000	1.1240	.0000	4.0751E+01	1.0546E-01	BRED 24*20
11	26.000	1.9060	.0000	3.7367E+00	9.6705E-03	BRED 28*24

BRANCH POINT NODE LIST

BRANCH POINT	NODE NUMBER
1	23
2	37

ELEMENT LOAD CASE MULTIPLIERS

	CASE A	CASE B	CASE C	CASE D
X-DIRECTION GRAVITY	.000	.000	.000	.000
Y-DIRECTION GRAVITY	.000	.000	.000	.000
Z-DIRECTION GRAVITY	.000	.000	.000	.000
THERMAL DISTORTION	.000	.000	.000	.000
PRESSURE DISTORTION	.000	.000	.000	.000

PIPE ELEMENT INPUT DATA

ELEMENT NUMBER	ELEMENT TYPE	NODE -I	NODE -J	MATL. NUMBER	SECTION NUMBER	REFERENCE TEMPERATURE (BEND RADIUS)	DESIGN PRESSURE (THIRD POINT)	PEAK PRESSURE (X3-ORDINATE)	TEST PRESSURE (Y3-ORDINATE)	END CODES END-I (Z3-ORDINATE)	END CODES END-J	NODE INCREMENT (BEND DEGREE)	INPUT TAG	
1	BEND	1	2	1	1	70.00	.00	.00	.00	0	0			I
						(30.000)	( )	(103.940)	(1427.250)	(-103.940)		(90.0076)		
2	TANGENT	2	3	1	1	70.00	.00	.00	.00	0	0	1	II	
3	BEND	3	4	1	1	70.00	.00	.00	.00	0	0			I
						(30.000)	( )	(103.940)	(1308.000)	(-103.940)		(90.0001)		
4	TANGENT	4	5	1	1	70.00	.00	.00	.00	0	0	1	II	
5	TANGENT	5	6	1	1	70.00	.00	.00	.00	0	0	1	II	
6	TANGENT	6	7	1	6	70.00	.00	.00	.00	0	0	1	II	
7	TANGENT	7	8	1	6	70.00	.00	.00	.00	0	0	1	II	
8	TANGENT	8	9	1	1	70.00	.00	.00	.00	0	0	1	II	
9	BEND	9	10	1	1	70.00	.00	.00	.00	0	0			I
						(30.000)	( )	(308.000)	(1308.000)	(-103.940)		(90.0001)		
10	TANGENT	10	11	1	1	70.00	.00	.00	.00	0	0	1	II	
11	TANGENT	11	12	1	1	70.00	.00	.00	.00	0	0	1	II	
12	TANGENT	12	13	1	10	70.00	.00	.00	.00	0	0	1	II	
13	TANGENT	13	23	1	2	70.00	.00	.00	.00	0	0	1	II	
14	BEND	14	15	1	1	70.00	.00	.00	.00	0	0			I
						(30.000)	( )	(103.940)	(1427.250)	(103.940)		(90.0076)		
15	TANGENT	15	16	1	1	70.00	.00	.00	.00	0	0	1	II	
16	BEND	16	17	1	1	70.00	.00	.00	.00	0	0			I
						(30.000)	( )	(103.940)	(1308.000)	(103.940)		(90.0001)		
17	TANGENT	17	18	1	1	70.00	.00	.00	.00	0	0	1	II	
18	TANGENT	18	19	1	1	70.00	.00	.00	.00	0	0	1	II	
19	TANGENT	19	20	1	6	70.00	.00	.00	.00	0	0	1	II	
20	TANGENT	20	21	1	6	70.00	.00	.00	.00	0	0	1	II	
21	TANGENT	21	22	1	1	70.00	.00	.00	.00	0	0	1	II	
22	TANGENT	22	23	1	1	70.00	.00	.00	.00	0	0	1	II	
23	TANGENT	23	24	1	2	70.00	.00	.00	.00	0	0	1	II	
24	TANGENT	24	25	1	2	70.00	.00	.00	.00	0	0	1	II	
25	BEND	25	26	1	2	70.00	.00	.00	.00	0	0			I
						(36.000)	( )	(308.000)	(1308.000)	(174.000)		(90.0001)		
26	TANGENT	26	27	1	2	70.00	.00	.00	.00	0	0	1	II	
27	TANGENT	27	28	1	2	70.00	.00	.00	.00	0	0	1	II	
28	TANGENT	28	29	1	2	70.00	.00	.00	.00	0	0	1	II	
29	TANGENT	29	30	1	2	70.00	.00	.00	.00	0	0	1	II	
30	TANGENT	30	31	1	2	70.00	.00	.00	.00	0	0	1	II	
31	TANGENT	31	32	1	7	70.00	.00	.00	.00	0	0	1	II	
32	TANGENT	32	33	1	7	70.00	.00	.00	.00	0	0	1	II	
33	TANGENT	33	34	1	2	70.00	.00	.00	.00	0	0	1	II	
34	TANGENT	34	35	1	2	70.00	.00	.00	.00	0	0	1	II	
35	TANGENT	35	36	1	2	70.00	.00	.00	.00	0	0	1	II	
36	TANGENT	36	37	1	2	70.00	.00	.00	.00	0	0	1	II	
37	TANGENT	37	38	1	5	70.00	.00	.00	.00	0	0	1	II	
38	TANGENT	38	39	1	5	70.00	.00	.00	.00	0	0	1	II	

PIPE ELEMENT INPUT DATA

ELEMENT NUMBER	ELEMENT TYPE	NODE -I	NODE -J	MATL. NUMBER	SECTION NUMBER	REFERENCE TEMPERATURE (BEND RADIUS)	DESIGN PRESSURE (THIRD POINT)	PEAK PRESSURE (X3-ORDINATE)	TEST PRESSURE (Y3-ORDINATE)	END END-I (Z3-ORDINATE)	CODES END-J	NODE INCREMENT (BEND DEGREE)	INPUT TAG	
39	TANGENT	39	40	1	5	70.00	.00	.00	.00	0	0	1	II	
40	TANGENT	37	41	1	2	70.00	.00	.00	.00	0	0	1	II	
41	TANGENT	41	42	1	2	70.00	.00	.00	.00	0	0	1	II	
42	TANGENT	42	43	1	2	70.00	.00	.00	.00	0	0	1	II	
43	TANGENT	43	44	1	2	70.00	.00	.00	.00	0	0			I
44	BEND	44	45	1	2	70.00	.00	.00	.00	0	0			
						(36.000)	( )	(1148.000)	(1308.000)	(174.000)		(90.0001)		
45	TANGENT	45	46	1	2	70.00	.00	.00	.00	0	0	1	II	
46	TANGENT	46	47	1	8	70.00	.00	.00	.00	0	0	1	II	
47	TANGENT	47	48	1	8	70.00	.00	.00	.00	0	0	1	II	
48	TANGENT	47	49	1	9	70.00	.00	.00	.00	0	0	1	II	
49	TANGENT	48	50	1	3	70.00	.00	.00	.00	0	0	1	II	
50	TANGENT	50	51	1	3	70.00	.00	.00	.00	0	0	1	II	
51	TANGENT	51	52	1	8	70.00	.00	.00	.00	0	0	1	II	
52	TANGENT	52	53	1	8	70.00	.00	.00	.00	0	0	1	II	
53	TANGENT	52	54	1	9	70.00	.00	.00	.00	0	0	1	II	
54	TANGENT	53	55	1	3	70.00	.00	.00	.00	0	0			I
55	BEND	55	56	1	3	70.00	.00	.00	.00	0	0			
						(36.000)	( )	(1148.000)	(1308.000)	(-288.000)		(90.0001)		
56	TANGENT	56	57	1	3	70.00	.00	.00	.00	0	0	1	II	
57	TANGENT	57	58	1	8	70.00	.00	.00	.00	0	0	1	II	
58	TANGENT	58	59	1	8	70.00	.00	.00	.00	0	0	1	II	
59	TANGENT	58	60	1	9	70.00	.00	.00	.00	0	0	1	II	
60	TANGENT	59	61	1	3	70.00	.00	.00	.00	0	0	1	II	
61	TANGENT	61	62	1	8	70.00	.00	.00	.00	0	0	1	II	
62	TANGENT	62	63	1	8	70.00	.00	.00	.00	0	0	1	II	
63	TANGENT	62	64	1	9	70.00	.00	.00	.00	0	0	1	II	
64	TANGENT	63	65	1	3	70.00	.00	.00	.00	0	0			I
65	BEND	65	66	1	3	70.00	.00	.00	.00	0	0			
						(36.000)	( )	(1424.000)	(1308.000)	(-288.000)		(90.0001)		
66	TANGENT	66	67	1	3	70.00	.00	.00	.00	0	0	1	II	
67	TANGENT	67	68	1	11	70.00	.00	.00	.00	0	0	1	II	
68	TANGENT	68	69	1	4	70.00	.00	.00	.00	0	0	1	II	
69	TANGENT	69	70	1	4	70.00	.00	.00	.00	0	0	1	II	
70	TANGENT	70	71	1	4	70.00	.00	.00	.00	0	0	1	II	

B R A N C H P O I N T D A T A

BRANCH POINT	NODE NUMBER	C O N N E C T I O N S . . .		
1	23	-13AT J	-22AT J	23AT I
2	37	-36AT J	37AT I	40AT I

N O D A L L O A D S (S T A T I C) O R M A S S E S (D Y N A M I C)

NODE NUMBER	LOAD CASE	X-AXIS FORCE	Y-AXIS FORCE	Z-AXIS FORCE	X-AXIS MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
49	0	7.76398E+00	7.76398E+00	7.76398E+00	0.00000E+00	0.00000E+00	0.00000E+00
49	1	0.00000E+00	-3.00000E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
54	0	7.76398E+00	7.76398E+00	7.76398E+00	0.00000E+00	0.00000E+00	0.00000E+00
54	1	0.00000E+00	-3.00000E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
60	0	7.76398E+00	7.76398E+00	7.76398E+00	0.00000E+00	0.00000E+00	0.00000E+00
60	1	0.00000E+00	-3.00000E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
64	0	7.76398E+00	7.76398E+00	7.76398E+00	0.00000E+00	0.00000E+00	0.00000E+00
64	1	0.00000E+00	-3.00000E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

BENCHMARK PROBLEM 1

LOWER FREQUENCY AMPLIFIED RESPONSE

PRINT OF FREQUENCIES

MODE NUMBER	CIRCULAR FREQUENCY (RAD/SEC)	FREQUENCY (CYCLES/SEC)	PERIOD (SEC)
1	5.7543E+01	9.1582E+00	1.0919E-01
2	5.9246E+01	9.4293E+00	1.0605E-01
3	6.8301E+01	1.0870E+01	9.1993E-02
4	6.8446E+01	1.0893E+01	9.1798E-02
5	8.0520E+01	1.2815E+01	7.8033E-02
6	8.8835E+01	1.4139E+01	7.0728E-02
7	1.2153E+02	1.9342E+01	5.1701E-02
8	1.2429E+02	1.9781E+01	5.0554E-02
9	1.2450E+02	1.9814E+01	5.0469E-02
10	1.2805E+02	2.0380E+01	4.9068E-02
11	1.4709E+02	2.3410E+01	4.2717E-02
12	1.4943E+02	2.3783E+01	4.2047E-02
13	1.8498E+02	2.9440E+01	3.3967E-02
14	1.9015E+02	3.0264E+01	3.3043E-02
15	1.9122E+02	3.0434E+01	3.2858E-02
16	2.0837E+02	3.3162E+01	3.0155E-02
17	2.2574E+02	3.5927E+01	2.7834E-02
18	2.2987E+02	3.6586E+01	2.7333E-02
19	2.4632E+02	3.9204E+01	2.5508E-02

MODAL PARTICIPATION FACTORS

MODE	FREQ(CPS)	X-DIRECTION	Y-DIRECTION	Z-DIRECTION
1	9.158	-2.9006E-02	2.6102E+00	-2.6883E-02
2	9.429	3.0460E+00	-1.0507E-02	-1.0057E+00
3	10.870	-7.6548E+00	-6.6878E-02	-4.0077E+00
4	10.893	-1.0096E-01	8.9227E+00	7.4187E-02
5	12.815	7.8032E-01	6.2645E-01	-3.8462E+00
6	14.139	-1.5929E+00	1.8923E-02	-9.1802E-01
7	19.342	5.1199E+00	-1.0169E-01	-2.6821E+00
8	19.781	1.0254E+00	-1.7279E+00	-9.9896E+00
9	19.814	-6.8280E-01	-5.3100E+00	3.7292E+00
10	20.380	1.0290E+00	-1.5171E+00	-1.9981E+00
11	23.410	5.0000E-02	-8.2597E+00	4.6554E-01
12	23.783	4.8082E+00	2.2761E-01	6.3344E+00
13	29.440	6.1847E+00	-1.4858E-02	-2.3426E-01
14	30.264	5.2935E+00	-3.7780E-02	-3.4609E+00
15	30.434	1.2183E-01	2.1883E+00	-1.1033E-01
16	33.162	4.4067E-02	6.1690E+00	5.7574E-01
17	35.927	6.9973E-02	5.6306E+00	-1.8181E-03
18	36.586	-1.7881E+00	-1.1030E-01	-6.1519E-01
19	39.204	-1.9431E-02	-5.9229E-01	-2.0035E-03

D Y N A M I C A N A L Y S I S

STRUCTURE LOAD CASE	ELEMENT LOAD MULTIPLIERS A	B	C	D
1 USM RESPONSE SPECTRA ANALYSIS	.000	.000	.000	.000

CASE 1
****

DIRECTION FACTORS

X = 1.0000 Y = 1.0000 Z = 1.0000

INDICATOR FOR DISPLACEMENT OR ACCELERATION SPECTRUM = 2

EQ.0 DISPLACEMENT
EQ.1 ACCELERATION IN IN./SEC.**2
EQ.2 ACCELERATION IN G**S

3 SPECTRA ARE ENTERED FOR CASE 1. KIND= 2

CLUSTER FACTOR, CF = .10000

SPECTRUM TABLE (SSE N-S B1.X

NUMBER OF POINTS = 14
SCALE FACTOR = 1.00000E+00

INPUT POINT	PERIOD	SPECTRUM VALUE
1	9.0000E-03	9.0860E-01
2	2.8000E-02	1.0240E+00
3	3.4800E-02	1.4420E+00
4	4.2600E-02	3.5630E+00
5	5.7600E-02	3.5630E+00
6	6.5100E-02	2.8300E+00
7	7.2400E-02	3.4190E+00
8	9.8000E-02	3.4190E+00
9	9.9000E-02	3.8100E+00
10	1.3400E-01	3.8100E+00
11	1.8500E-01	4.5530E+00
12	2.5040E-01	4.5530E+00
13	3.3610E-01	3.4040E+00
14	5.8800E+00	2.4200E 02

SPECTRUM TABLE (SSE Y B1.Y

NUMBER OF POINTS = 10
SCALE FACTOR = 1.00000E+00

INPUT POINT	PERIOD	SPECTRUM VALUE
1	9.0000E-03	9.4240E-01
2	2.7600E-02	1.4610E+00
3	3.6300E-02	3.0540E+00
4	4.4700E-02	1.2772E+01
5	6.0500E-02	1.2772E+01
6	7.8000E-02	3.9410E+00
7	9.9000E-02	4.4400E+00
8	1.3400E-01	4.4400E+00
9	3.0200E-01	1.6490E+00
10	1.1760E+01	3.4000E-03

SPECTRUM TABLE (SSE Z B1.Z

NUMBER OF POINTS = 12
SCALE FACTOR = 1.00000E+00

INPUT POINT	PERIOD	SPECTRUM VALUE
1	9.0000E-03	8.7670E-01
2	2.5900E-02	9.8310E-01
3	3.1000E-02	1.9424E+00
4	3.3500E-02	2.0300E+00
5	4.5300E-02	2.0300E+00
6	5.1700E-02	1.8270E+00
7	5.6100E-02	3.3970E+00
8	7.5900E-02	3.3970E+00
9	9.0300E-02	3.5520E+00
10	1.2210E-01	3.5520E+00
11	3.1800E-01	3.4600E+00
12	1.1760E+01	6.4000E-03

CLUSTERRING. +1 MEANS MODE I CLOSE TO I+1. -1, NOT.
1. -1. 1. -1. -1. -1. 1. 1. 1. -1. 1. -1. 1. 1. -1. 1. -1. 1. 0.

NODE NUMBER	MODE NUMBER	DISPLACEMENTS / ROTATIONS X-TRANSLATION	Y-TRANSLATION	Z-TRANSLATION	X-ROTATION	Y-ROTATION	Z-ROTATION	ACCELERATIONS IN G'S X-DIRECTION	Y-DIRECTION	Z-DIRECTION
1	TOTAL..	7.16042E-10	1.52791E-09	1.72638E-09	1.15859E-09	2.11988E-10	1.58531E-10	.000	.000	.000
2	TOTAL..	1.01050E-02	2.34987E-02	4.81911E-02	2.23153E-03	4.65789E-04	4.54253E-04	.214	.532	1.123
3	TOTAL..	3.40857E-02	2.35421E-02	1.91980E-01	2.42943E-03	5.01822E-04	3.39275E-04	1.070	.540	4.126
4	TOTAL..	3.85439E-02	3.18001E-02	2.[illegible]1E-01	1.96457E-03	1.01226E-03	8.15087E-04	.820	1.446	4.825
5	TOTAL..	3.85236E-02	5.06322E-02	2..6960E-01	2.00256E-03	1.22892E-03	7.65798E-04	.820	3.036	4.181
6	TOTAL..	3.84922E-02	6.92369E-02	1.82[illegible]54E-01	2.10598E-03	1.46484E-03	5.87951E-04	.819	4.292	3.412
7	TOTAL..	3.84790E-02	7.80257E-02	1.60163E-01	2.14167E-03	1.52163E-03	5.28068E-04	.819	4.797	2.920
8	TOTAL..	3.84603E-02	8.55782E-02	1.38701E-01	2.18082E-03	1.56855E-03	4.68620E-04	.818	5.189	2.517
9	TOTAL..	3.83253E-02	9.47209E-02	9.01573E-02	2.50598E-03	1.67032E-03	3.37337E-04	.813	5.375	1.677
10	TOTAL..	1.65787E-09	3.93974E-09	9.2164[illegible]E-02	3.19935E-03	9.91338E-04	6.00484E-04	.000	.000	1.894
11	TOTAL..	6.06521E-02	2.10201E-01	9.19303E-02	2.08218E-03	5.83289E-04	5.81523E-04	1.009	11.383	1.890
12	TOTAL..	6.92669E-02	2.61554E-01	9.15575E-02	9.95425E-04	5.15258E-04	6.34077E-04	1.151	14.023	1.880
13	TOTAL..	5.68096E-02	2.36574E-01	9.14465E-02	1.66764E-03	8.06877E-04	6.51252E-04	.960	12.588	1.877
14	TOTAL..	1.54786E-09	3.19216E-09	2.33033E-09	1.72321E-09	4.18360E-10	4.57714E-10	.000	.000	.000
15	TOTAL..	1.49511E-02	2.82197E-02	6.23313E-02	2.78808E-03	7.91417E-04	4.52491E-04	.588	1.110	2.188
16	TOTAL..	4.14471E-02	2.90785E-02	2.39997E-01	3.00036E-03	6.96093E-04	3.75538E-04	1.457	1.157	8.164
17	TOTAL..	4.26001E-02	5.97444E-02	2.96382E-01	2.03814E-03	1.57778E-03	1.73953E-03	.811	2.971	9.502
18	TOTAL..	4.25521E-02	1.06565E-01	2.54736E-01	1.90716E-03	1.80775E-03	1.62285E-03	.802	5.510	7.540
19	TOTAL..	4.24950E-02	1.49839E-01	2.09141E-01	1.83869E-03	1.95787E-03	1.22524E-03	.793	7.761	5.386
20	TOTAL..	4.24750E-02	1.70547E-01	1.82405E-01	1.83223E-03	1.96717E-03	1.08496E-03	.790	8.812	4.104
21	TOTAL..	4.24501E-02	1.88071E-01	1.58463E-01	1.83034E-03	1.94198E-03	9.33468E-04	.787	9.717	2.907

22 TOTAL..	4.22363E-02	2.08146E-01	1.03736E-01	1.97717E-03	1.15582E-03	4.84701E-04	.763	10.860	1.768
23 TOTAL..	4.21707E-02	2.06111E-01	9.13579E-02	2.06379E-03	1.00385E-03	6.62556E-04	.756	10.852	1.874
24 TOTAL..	2.34967E-02	1.68236E-01	9.12942E-02	2.44053E-03	1.24034E-03	7.97117E-04	.446	8.684	1.877
25 TOTAL..	1.33770E-08	1.26149E-01	9.12224E-02	2.71788E-03	1.52848E-03	9.34015E-04	.000	6.236	1.879
26 TOTAL..	9.48463E-02	1.25991E-08	3.10905E-09	3.27992E-03	1.91610E-03	2.39806E-03	2.119	.000	.000
27 TOTAL..	9.72867E-02	1.33251E-01	8.68946E-02	3.14818E-03	1.53756E-03	2.60384E-03	2.206	6.377	2.442
28 TOTAL..	9.95652E-02	2.48738E-01	1.47921E-01	3.03116E-03	1.02604E-03	1.96253E-03	2.286	12.002	4.480
29 TOTAL..	1.01778E-01	3.16482E-01	1.80661E-01	2.92440E-03	3.56639E-04	7.44502E-04	2.364	15.232	5.717
30 TOTAL..	1.03922E-01	3.16005E-01	1.77999E-01	2.82907E-03	4.85996E-04	8.04203E-04	2.438	15.010	5.692
31 TOTAL..	1.05993E-01	2.45545E-01	1.39659E-01	2.74634E-03	1.14288E-03	2.10068E-03	2.510	11.354	4.376
32 TOTAL..	1.06536E-01	1.84802E-01	1.06571E-01	2.72821E-03	1.28230E-03	2.33421E-03	2.528	8.345	3.258
33 TOTAL..	1.07055E-01	1.18729E-01	7.00476E-02	2.71092E-03	1.38588E-03	2.46595E-03	2.546	5.140	2.052
34 TOTAL..	1.08803E-01	1.03538E-08	4.42617E-09	2.65143E-03	1.60239E-03	2.49755E-03	2.604	.000	.000
35 TOTAL..	1.12279E-01	2.39980E-01	1.58024E-01	2.58049E-03	1.48538E-03	2.39133E-03	2.718	3.681	2.692
36 TOTAL..	1.15393E-01	4.03043E-01	2.52226E-01	2.58451E-03	5.79957E-04	1.07119E-03	2.815	5.117	3.808
37 TOTAL..	1.16821E-01	4.07141E-01	2.66809E-01	2.61304E-03	8.86094E-04	9.18388E-04	2.858	5.902	3.451
38 TOTAL..	1.16926E-01	4.46186E-01	2.79921E-01	2.61304E-03	9.60044E-04	9.83744E-04	2.863	5.891	4.501
39 TOTAL..	1.16966E-01	4.85020E-01	3.14068E-01	2.61304E-03	9.77553E-04	9.99371E-04	2.865	6.154	5.689
40 TOTAL..	1.16967E-01	4.95325E-01	3.23256E-01	2.61304E-03	9.77743E-04	9.99534E-04	2.865	6.264	6.013
41 TOTAL..	1.18164E-01	3.28569E-01	1.92868E-01	2.67150E-03	1.29652E-03	1.90173E-03	2.893	5.631	2.515
42 TOTAL..	1.19364E-01	1.91085E-01	1.16484E-01	2.76442E-03	1.49583E-03	2.53969E-03	2.922	3.770	2.094
43 TOTAL..	1.20213E-01	6.27353E-02	4.22028E-02	2.86078E-03	1.66389E-03	2.59767E-03	2.939	1.358	1.000

44 TOTAL..	1.20600E-01	7.16196E-09	1.61923E-08	2.91405E-03	1.84014E-03	2.45918E-03	2.947	.000	.000
45 TOTAL..	1.49220E-01	1.09106E-01	8.79794E-02	2.80839E-03	1.63790E-03	2.16596E-03	2.644	1.737	3.005
46 TOTAL..	2.35515E-01	2.61730E-01	9.17031E-02	1.74657E-03	1.05380E-03	2.45574E-03	3.094	3.142	3.174
47 TOTAL..	2.57306E-01	3.04405E-01	9.21454E-02	1.54721E-03	9.68042E-04	2.50502E-03	3.175	3.671	3.194
48 TOTAL..	2.76049E-01	3.41517E-01	9.25402E-02	1.31947E-03	8.63140E-04	2.53696E-03	3.350	4.195	3.212
49 TOTAL..	2.57328E-01	3.25607E-01	1.00194E-01	1.54721E-03	9.64494E-04	2.51193E-03	3.176	4.440	2.882
50 TOTAL..	2.83398E-01	3.72940E-01	9.46521E-02	4.50718E-04	6.73715E-04	2.79034E-03	3.736	4.853	3.306
51 TOTAL..	2.14181E-01	2.85721E-01	9.65435E-02	1.91738E-03	1.47478E-03	3.09218E-03	3.362	3.884	3.390
52 TOTAL..	1.73062E-01	2.31037E-01	9.68403E-02	2.09462E-03	1.59366E-03	3.13937E-03	2.874	3.178	3.402
53 TOTAL..	1.28771E-01	1.71847E-01	9.70792E-02	2.22958E-03	1.68263E-03	3.16226E-03	2.289	2.398	3.412
54 TOTAL..	1.73080E-01	2.57820E-01	1.01341E-01	2.09462E-03	1.59584E-03	3.14847E-03	2.875	4.364	3.763
55 TOTAL..	5.62743E-09	1.01617E-08	9.82285E-02	2.45152E-03	1.86995E-03	3.32739E-03	.000	.000	3.460
56 TOTAL..	6.31693E-02	1.34810E-01	1.30642E-01	2.01546E-03	8.95393E-04	2.37319E-03	1.999	4.848	5.015
57 TOTAL..	6.35764E-02	1.96467E-01	1.49490E-01	2.18294E-03	4.43736E-04	1.69824E-03	2.024	7.666	5.831
58 TOTAL..	6.37190E-02	2.34741E-01	1.55717E-01	2.27802E-03	2.89111E-04	1.37272E-03	2.033	9.319	6.133
59 TOTAL..	6.38317E-02	2.63395E-01	1.56156E-01	2.32654E-03	2.35271E-04	9.99183E-04	2.040	10.533	6.210
60 TOTAL..	5.69259E-02	2.90792E-01	1.55761E-01	2.29969E-03	2.86865E-04	1.37272E-03	1.838	11.661	6.135
61 TOTAL..	6.41672E-02	2.66295E-01	1.34900E-01	2.59204E-03	8.82522E-04	7.89076E-04	2.061	10.692	5.438
62 TOTAL..	6.42538E-02	2.41554E-01	1.08445E-01	2.67360E-03	1.04977E-03	1.13418E-03	2.067	9.708	4.407
63 TOTAL..	6.42954E-02	2.06690E-01	7.77807E-02	2.67407E-03	1.15575E-03	1.42116E-03	2.070	8.307	3.196
64 TOTAL..	9.65467E-02	3.30809E-01	1.08476E-01	2.70454E-03	1.05840E-03	1.13418E-03	3.510	13.219	4.408
65 TOTAL..	6.43488E-02	1.70686E-01	5.07360E-02	2.68156E-03	1.25704E-03	1.79115E-03	2.074	6.853	2.115

66 TOTAL..	4.24091E-02	1.15980E-08	5.04635E-03	1.77738E-03	6.92097E-04	1.99844E-03	1.370	.000	.214
67 TOTAL..	4.54928E-02	8.93330E-02	3.68789E-03	3.87211E-04	2.19419E-04	1.32854E-03	2.470	3.849	.156
68 TOTAL..	4.49892E-02	9.49260E-02	3.34603E-03	1.22526E-04	1.53272E-04	1.18638E-03	2.555	4.147	.142
69 TOTAL..	3.33935E-02	7.71621E-02	2.23503E-03	4.20258E-04	2.03322E-04	7.90917E-04	2.065	3.529	.095
70 TOTAL..	1.28057E-02	2.98255E-02	1.11882E-03	5.02807E-04	2.16345E-04	3.95459E-04	.820	1.415	.048
71 TOTAL..	1.29526E-09	2.98136E-09	5.51931E-09	3.41779E-09	1.46764E-09	1.27557E-09	.000	.000	.000

R E S P O N S E S P E C T R U M S T R E S S C O M P O N E N T S (KIND = 2)

OR EACH ELEMENT, THE FOLLOWING INFORMATION IS PRINTED:

1. FOR EACH EARTH QUAKE DIRECTION; THE NUMBER OF THE MODE WITH THE LARGEST STRESS.
2. THE VALUE OF THAT STRESS.
3. IF REQUESTED; THE MODE BY MODE STRESSES FOR EACH EARTH QUAKE DIRECTION.
4. THE RESULTANT FOR EACH EARTH QUAKE DIRECTION.
5. THE GRAND TOTAL OF THE THREE EARTH QUAKE DIRECTIONS.

**(NOTE: THE X, Y, OR Z REFERS TO THE EARTH QUAKE DIRECTION.)

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (1)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X	5	5	3	5	3	5	5	5	3	5	3	5
X MAXIMUM	-1.704E+03	5.637E+02	1.972E+03	-1.625E+05	-8.612E+04	1.383E+05	-8.060E+02	1.603E+03	1.972E+03	-1.274E+05	-1.155E+05	1.113E+05
Y	11	11	11	5	11	5	11	16	11	5	11	11
Y MAXIMUM	-1.067E+04	-1.068E+04	-2.679E+03	-1.504E+05	1.520E+05	1.280E+05	-1.510E+04	4.496E+03	-2.679E+03	-1.179E+05	1.153E+05	1.895E+05
Z	5	5	5	5	3	5	5	5	5	5	5	5
Z MAXIMUM	8.400E+03	-2.779E+03	9.420E+03	8.010E+05	-4.684E+04	-6.817E+05	3.974E+03	-7.905E+03	9.420E+03	6.280E+05	-3.877E+05	-5.489E+05
GRAND TOTAL	1.492E+04	1.528E+04	1.116E+04	8.954E+05	2.120E+05	7.521E+05	1.886E+04	9.927E+03	1.116E+04	6.874E+05	4.598E+05	6.258E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (1)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	5	5	3	5	5	5
X MAXIMUM	5.639E+02	1.704E+03	1.972E+03	-5.124E+04	1.051E+05	7.023E+04
Y	11	11	11	11	5	16
Y MAXIMUM	-1.068E+04	1.067E+04	-2.679E+03	7.163E+04	9.731E+04	-6.611E+04
Z	5	5	5	5	5	5
Z MAXIMUM	-2.780E+03	-8.400E+03	9.420E+03	2.526E+05	-5.183E+05	-3.463E+05
GRAND TOTAL	1.528E+04	1.492E+04	1.116E+04	2.993E+05	5.693E+05	3.798E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (2)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	5	5	3	5	3	5	5	5	3	5	3	3
X MAXIMUM	4.520E+02	2.334E+03	1.008E+03	-5.125E+04	-4.253E+04	1.240E+05	4.520E+02	2.334E+03	1.008E+03	-5.125E+04	1.721E+04	2.739E+04
Y	11	11	11	11	16	5	11	11	11	11	11	11
Y MAXIMUM	-1.103E+04	8.388E+03	5.579E+03	7.163E+04	3.702E+04	1.148E+05	-1.103E+04	8.388E+03	5.579E+03	7.163E+04	2.982E+05	-4.490E+05
Z	5	5	5	5	5	5	5	5	5	5	5	5
Z MAXIMUM	-2.229E+03	-1.151E+04	9.160E+02	2.527E+05	-1.217E+05	-6.114E+05	-2.229E+03	-1.151E+04	9.160E+02	2.527E+05	-6.738E+04	7.048E+04
GRAND TOTAL	1.523E+04	1.558E+04	7.060E+03	2.993E+05	1.557E+05	6.675E+05	1.523E+04	1.558E+04	7.060E+03	2.993E+05	3.601E+05	4.918E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (3)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X	5	3	5	5	3	3	3	3	5	3	5	3
X MAXIMUM	3.399E+02	-7.988E+02	1.431E+03	-5.125E+04	-2.739E+04	1.721E+04	-6.854E+02	-4.443E+02	1.431E+03	-4.887E+04	7.670E+04	3.266E+04
Y	11	11	11	11	11	11	11	11	11	11	11	11
Y MAXIMUM	-1.134E+04	-4.596E+03	5.214E+03	7.163E+04	4.490E+05	2.982E+05	-1.127E+04	4.772E+03	5.214E+03	4.139E+05	3.774E+05	2.960E+05
Z	5	5	5	5	5	5	5	16	5	5	5	5
Z MAXIMUM	-1.676E+03	-1.548E+03	-7.054E+03	2.527E+05	-7.048E+04	-6.738E+04	-2.280E+03	-4.042E+02	-7.054E+03	6.686E+04	-3.781E+05	-4.927E+04
GRAND TOTAL	1.516E+04	5.928E+03	9.481E+03	2.993E+05	4.918E+05	3.601E+05	1.477E+04	6.856E+03	9.481E+03	4.720E+05	5.843E+05	3.463E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (3)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	3	5	5	3	5	3
X MAXIMUM	-7.988E+02	-3.399E+02	1.431E+03	-6.301E+04	9.417E+04	3.606E+04
Y	11	11	11	11	5	11
Y MAXIMUM	-4.596E+03	1.134E+04	5.214E+03	6.054E+05	8.716E+04	9.572E+04
Z	5	5	5	5	5	5
Z MAXIMUM	-1.548E+03	1.676E+03	-7.054E+03	-2.821E+05	-4.643E+05	-7.122E+04
GRAND TOTAL	5.928E+03	1.516E+04	9.481E+03	7.229E+05	5.144E+05	1.513E+05

ELEMENT TYPE (3/D P I P E) /// ELEMENT NUMBER (4)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	3	5	3	3	5	3	3	5	3	3	5	3
X MAXIMUM	-6.082E+02	-2.416E+02	-7.222E+02	-6.301E+04	9.417E+04	3.606E+04	-6.082E+02	-2.416E+02	-7.222E+02	-6.301E+04	1.118E+05	3.059E+04
Y	11	11	11	11	5	11	11	11	11	11	11	16
Y MAXIMUM	-4.370E+03	1.060E+04	3.025E+03	6.054E+05	8.716E+04	9.572E+04	-4.370E+03	1.060E+04	3.025E+03	6.054E+05	1.755E+05	2.831E+05
Z	5	5	5	5	5	5	5	5	5	5	5	5
Z MAXIMUM	-2.112E+03	1.191E+03	-2.894E+03	-2.821E+05	-4.643E+05	-7.122E+04	-2.112E+03	1.191E+03	-2.894E+03	-2.821E+05	-5.511E+05	-1.070E+05
GRAND TOTAL	5.929E+03	1.370E+04	4.862E+03	7.229E+05	5.144E+05	1.513E+05	5.929E+03	1.370E+04	4.862E+03	7.229E+05	6.205E+05	3.853E+05

ELEMENT TYPE (3/D P I P E) /// ELEMENT NUMBER (5)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	12	7	3	5	3	7	12	7	3	5	5
X MAXIMUM	5.449E+02	2.054E+02	-7.945E+02	-6.301E+04	1.118E+05	3.059E+04	5.449E+02	2.054E+02	-7.945E+02	-6.301E+04	1.121E+05	2.646E+04
Y	11	11	11	11	11	16	11	11	11	11	11	11
Y MAXIMUM	-4.191E+03	8.923E+03	1.437E+03	6.054E+05	1.755E+05	2.831E+05	-4.191E+03	8.923E+03	1.437E+03	6.054E+05	2.186E+05	-4.900E+05
Z	5	5	12	5	5	5	5	5	12	5	5	5
Z MAXIMUM	-2.551E+03	7.840E+02	2.292E+02	-2.821E+05	-5.511E+05	-1.070E+05	-2.551E+03	7.840E+02	2.292E+02	-2.821E+05	-5.529E+05	-1.305E+05
GRAND TOTAL	6.108E+03	1.114E+04	2.526E+03	7.229E+05	6.205E+05	3.853E+05	6.108E+03	1.114E+04	2.526E+03	7.229E+05	6.335E+05	7.039E+05

ELEMENT TYPE (3/D P I P E) /// ELEMENT NUMBER (6)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	18	3	7	3	5	5	18	3	7	3	5	5
X MAXIMUM	-7.698E+02	2.230E+02	-9.538E+02	-6.301E+04	1.121E+05	2.646E+04	-7.698E+02	2.230E+02	-9.538E+02	-6.301E+04	1.008E+05	2.725E+04
Y	11	11	5	11	11	11	11	11	5	11	11	11
Y MAXIMUM	-3.941E+03	5.325E+03	-5.849E+02	6.054E+05	2.186E+05	-4.900E+05	-3.941E+03	5.325E+03	-5.849E+02	6.054E+05	2.111E+05	-5.858E+05
Z	5	16	5	5	5	5	5	16	5	5	5	5
Z MAXIMUM	-3.147E+03	-2.328E+02	3.116E+03	-2.821E+05	-5.529E+05	-1.305E+05	-3.147E+03	-2.328E+02	3.116E+03	-2.821E+05	-4.968E+05	-1.343E+05
GRAND TOTAL	6.499E+03	6.205E+03	3.992E+03	7.229E+05	6.335E+05	7.039E+05	6.499E+03	6.205E+03	3.992E+03	7.229E+05	5.753E+05	8.094E+05

ELEMENT TYPE (3/D P I P E) /// ELEMENT NUMBER (7)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	18	3	5	3	5	5	18	3	5	3	5	5
X MAXIMUM	-1.093E+03	2.549E+02	-1.329E+03	-6.301E+04	1.008E+05	2.725E+04	-1.093E+03	2.549E+02	-1.329E+03	-6.301E+04	7.685E+04	2.541E+04
Y	11	16	11	11	11	11	11	16	11	11	11	11
Y MAXIMUM	-3.623E+03	1.721E+03	-2.457E+03	6.054E+05	2.111E+05	-5.858E+05	-3.623E+03	1.721E+03	-2.457E+03	6.054E+05	1.668E+05	-5.852E+05
Z	5	5	5	5	5	5	5	5	5	5	5	5
Z MAXIMUM	-3.902E+03	-5.022E+02	6.551E+03	-2.821E+05	-4.968E+05	-1.343E+05	-3.902E+03	-5.022E+02	6.551E+03	-2.821E+05	-3.789E+05	-1.253E+05
GRAND TOTAL	7.083E+03	1.978E+03	8.058E+03	7.229E+05	5.753E+05	8.094E+05	7.083E+03	1.978E+03	8.058E+03	7.229E+05	4.463E+05	7.873E+05

ELEMENT TYPE (3/D P I P E) /// ELEMENT NUMBER (8)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	18	7	3	3	5	5	18	7	3	3	3	5
X MAXIMUM	-1.404E+03	3.127E+02	2.175E+03	-6.301E+04	7.685E+04	2.541E+04	-1.404E+03	3.127E+02	2.175E+03	-6.301E+04	9.446E+04	1.388E+04
Y	16	16	11	11	11	11	16	16	11	11	16	11
Y MAXIMUM	3.350E+03	6.004E+03	-4.077E+03	6.054E+05	1.668E+05	-5.852E+05	3.350E+03	6.004E+03	-4.077E+03	6.054E+05	3.437E+04	-3.027E+05
Z	5	5	5	5	5	5	5	5	5	5	5	5
Z MAXIMUM	-4.630E+03	-1.183E+03	9.273E+03	-2.821E+05	-3.789E+05	-1.253E+05	-4.630E+03	-1.183E+03	9.273E+03	-2.821E+05	6.675E+04	-6.845E+04
GRAND TOTAL	7.783E+03	8.782E+03	1.140E+04	7.229E+05	4.463E+05	7.873E+05	7.783E+03	8.782E+03	1.140E+04	7.229E+05	1.857E+05	3.801E+05

ELEMENT TYPE (3/D P I P E) /// ELEMENT NUMBER (9)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X	18	3	7	3	5	3	3	5	7	5	3	3
X MAXIMUM	-1.693E+03	3.189E+03	-4.140E+02	-6.301E+04	1.388E+04	-9.446E+04	2.595E+03	-2.231E+03	-4.140E+02	4.715E+04	3.962E+04	-1.579E+05
Y	16	11	11	11	11	16	11	5	11	11	11	11
Y MAXIMUM	3.499E+03	-4.557E+03	1.239E+04	6.054E+05	-3.027E+05	-3.437E+04	-5.353E+03	-2.065E+03	1.239E+04	3.229E+05	-3.792E+05	9 930E+04
Z	5	5	5	5	5	5	5	5	5	5	5	5
Z MAXIMUM	-5.320E+03	1.024E+04	1.755E+03	-2.821E+05	-6.845E+04	-6.675E+04	3.478E+03	1.100E+04	1.755E+03	-2.324E+05	1.883E+05	-3.307E+05
GRAND TOTAL	8.539E+03	1.269E+04	1.589E+04	7.229E+05	3.801E+05	1.857E+05	9.162E+03	1.242E+04	1.589E+04	4.542E+05	4.498E+05	4.465E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (9)

	PX (J)	VY (J)	VZ (J)	TX (J)	MY (J)	MZ (J)
X	3	18	7	7	5	3
X MAXIMUM	3.189E+03	1.693E+03	-4.140E+02	-2.138E+04	6.790E+04	-1.757E+05
Y	11	16	11	16	11	5
Y MAXIMUM	-4.557E+03	-3.499E+03	1.239E+04	-7.382E+04	-2.335E+05	1.002E+05
Z	5	5	5	5	5	5
Z MAXIMUM	1.024E+04	5.320E+03	1.755E+03	-1.579E+04	3.348E+05	-5.335E+05
GRAND TOTAL	1.269E+04	8.539E+03	1.589E+04	1.706E+05	4.961E+05	6.455E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (10)

	PX (I)	VY (I)	VZ (I)	TX (I)	MY (I)	MZ (I)	PX (J)	VY (J)	VZ (J)	TX (J)	MY (J)	MZ (J)
X	3	3	3	7	3	5	3	3	3	7	3	10
X MAXIMUM	4.650E+03	1.740E+03	-1.061E+04	-2.138E+04	1.757E+05	-6.790E+04	4.650E+03	1.740E+03	-1.061E+04	-2.138E+04	-5.716E+05	9.082E+04
Y	11	11	11	16	5	11	11	11	11	16	5	11
Y MAXIMUM	-4.525E+03	-3.761E+04	7.664E+02	-7.382E+04	1.002E+05	-2.335E+05	-4.525E+03	-3.761E+04	7.664E+02	-7.382E+04	-6.416E+04	2.415E+06
Z	5	10	3	5	5	5	5	10	3	5	5	5
Z MAXIMUM	1.034E+04	1.636E+03	-5.771E+03	-1.579E+04	5.335E+05	3.348E+05	1.034E+04	1.636E+03	-5.771E+03	-1.579E+04	3.418E+05	3.046E+05
GRAND TOTAL	1.392E+04	4.000E+04	1.329E+04	1.706E+05	6.455E+05	4.961E+05	1.392E+04	4.000E+04	1.329E+04	1.706E+05	8.116E+05	2.571E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (11)

	PX (I)	VY (I)	VZ (I)	TX (I)	MY (I)	MZ (I)	PX (J)	VY (J)	VZ (J)	TX (J)	MY (J)	MZ (J)
X	3	3	3	7	3	10	3	3	3	7	3	3
X MAXIMUM	6.395E+03	1.582E+03	-9.461E+03	-2.138E+04	-5.716E+05	9.082E+04	6.395E+03	1.582E+03	-9.461E+03	-2.138E+04	-1.238E+06	-1.803E+05
Y	11	11	11	16	5	11	11	11	11	16	10	11
Y MAXIMUM	-4.465E+03	-1.555E+04	7.673E+02	-7.382E+04	-6.416E+04	2.415E+06	-4.465E+03	-1.555E+04	7.673E+02	-7.382E+04	-4.030E+04	3.511E+06
Z	5	5	3	5	5	5	5	5	3	5	3	5
Z MAXIMUM	1.044E+04	1.133E+03	-5.146E+03	-1.579E+04	3.418E+05	3.046E+05	1.044E+04	1.133E+03	-5.146E+03	-1.579E+04	-6.734E+05	2.248E+05
GRAND TOTAL	1.589E+04	1.721E+04	1.202E+04	1.706E+05	8.116E+05	2.571E+06	1.589E+04	1.721E+04	1.202E+04	1.706E+05	1.512E+06	3.742E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (12)

	PX (I)	VY (I)	VZ (I)	TX (I)	MY (I)	MZ (I)	PX (J)	VY (J)	VZ (J)	TX (J)	MY (J)	MZ (J)
X	3	3	3	7	3	3	3	3	3	7	3	3
X MAXIMUM	7.612E+03	1.441E+03	-8.508E+03	-2.138E+04	-1.238E+06	-1.803E+05	7.612E+03	1.441E+03	-8.508E+03	-2.138E+04	-1.408E+06	-2.091E+05
Y	11	11	5	16	10	11	11	11	5	16	10	11
Y MAXIMUM	-4.408E+03	3.300E+03	6.770E+02	-7.382E+04	-4.030E+04	3.511E+06	-4.408E+03	3.300E+03	6.770E+02	-7.382E+04	-5.210E+04	3.445E+06
Z	5	5	3	5	3	5	5	5	3	5	3	5
Z MAXIMUM	1.050E+04	1.637E+03	-4.627E+03	-1.579E+04	-6.734E+05	2.248E+05	1.050E+04	1.637E+03	-4.627E+03	-1.579E+04	-7.659E+05	1.921E+05
GRAND TOTAL	1.749E+04	5.126E+03	1.104E+04	1.706E+05	1.512E+06	3.742E+06	1.749E+04	5.126E+03	1.104E+04	1.706E+05	1.707E+06	3.684E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (13)

	PX (I)	VY (I)	VZ (I)	TX (I)	MY (I)	MZ (I)	PX (J)	VY (J)	VZ (J)	TX (J)	MY (J)	MZ (J)
X	3	3	3	7	3	3	3	3	3	7	3	3
X MAXIMUM	8.253E+03	1.377E+03	-8.093E+03	-2.138E+04	-1.408E+06	-2.091E+05	8.253E+03	1.377E+03	-8.093E+03	-2.138E+04	-1.546E+06	-2.325E+05
Y	11	11	5	16	10	11	11	11	5	16	10	11
Y MAXIMUM	-4.376E+03	1.217E+04	6.976E+02	-7.382E+04	-5.210E+04	3.445E+06	-4.376E+03	1.217E+04	6.976E+02	-7.382E+04	-6.175E+04	3.238E+06
Z	5	5	3	5	3	5	5	5	3	5	3	5
Z MAXIMUM	1.053E+04	1.870E+03	-4.402E+03	-1.579E+04	-7.659E+05	1.921E+05	1.053E+04	1.870E+03	-4.402E+03	-1.579E+04	-8.408E+05	1.603E+05
GRAND TOTAL	1.839E+04	1.346E+04	1.068E+04	1.706E+05	1.707E+06	3.684E+06	1.839E+04	1.346E+04	1.068E+04	1.706E+05	1.867E+06	3.477E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (14)

	PX (I)	VY (I)	VZ (I)	TX (I)	MY (I)	MZ (I)	PX (C)	VY (C)	VZ (C)	TX (C)	MY (C)	MZ (C)
X	7	7	3	3	3	7	3	7	3	3	3	7
X MAXIMUM	4.747E+03	-3.327E+03	8.762E+03	6.708E+05	-1.805E+05	-3.611E+05	-2.143E+03	-5.710E+03	8.762E+03	4.237E+05	-4.161E+05	-2.488E+05
Y	11	11	11	11	11	11	11	11	11	9	11	9
Y MAXIMUM	4.318E+03	2.588E+04	1.179E+04	3.046E+05	-3.146E+05	4.679E+05	2.136E+04	1.525E+04	1.179E+04	-2.339E+05	-1.876E+05	-1.628E+05
Z	3	10	3	3	3	3	10	8	3	3	3	3
Z MAXIMUM	-2.109E+03	-1.963E+03	4.766E+03	3.649E+05	-9.816E+04	1.600E+05	-1.924E+03	2.159E+03	4.766E+03	2.305E+05	-2.283E+05	1.317E+05
GRAND TOTAL	1.699E+04	3.192E+04	2.418E+04	1.388E+06	4.184E+05	1.084E+06	2.783E+04	2.365E+04	2.418E+04	1.051E+06	7.042E+05	7.013E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (14)

	PX(J)		VY(J)		VZ(J)		TX(J)		MY(J)		MZ(J)	
X		7		7		3		7		3		3
X MAXIMUM	-3.328E+03		-4.747E+03		8.762E+03		-2.069E+05		-4.080E+05		1.524E+05	
Y		11		11		11		9		9		11
Y MAXIMUM	2.588E+04		-4.321E+03		1.179E+04		-1.145E+05		1.709E+05		-1.791E+05	
Z		10		3		3		8		3		3
Z MAXIMUM	-1.963E+03		2.109E+03		4.766E+03		6.183E+04		-2.219E+05		8.288E+04	
GRAND TOTAL	3.192E+04		1.699E+04		2.418E+04		4.630E+05		8.389E+05		4.531E+05	

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (15)

	PX(I)		VY(I)		VZ(I)		TX(I)		MY(I)		MZ(I)		PX(J)		VY(J)		VZ(J)		TX(J)		MY(J)		MZ(J)	
X		7		3		3		7		3		3		7		3		3		7		10		7
X MAXIMUM	-2.696E+03		-8.385E+03		-3.307E+03		-2.069E+05		1.807E+05		-3.962E+05		-2.696E+03		-8.385E+03		-3.307E+03		-2.069E+05		-4.319E+04		-1.406E+05	
Y		11		9		11		9		11		9		11		9		11		9		11		11
Y MAXIMUM	2.514E+04		4.518E+03		-1.080E+04		-1.146E+05		9.180E+04		1.825E+05		2.514E+04		4.518E+03		-1.080E+04		-1.146E+05		-5.484E+05		3.899E+05	
Z		10		3		3		8		3		3		10		3		3		8		10		3
Z MAXIMUM	-1.954E+03		-4.561E+03		-1.798E+03		6.184E+04		9.829E+04		-2.155E+05		-1.954E+03		-4.561E+03		-1.798E+03		6.184E+04		4.496E+04		5.472E+04	
GRAND TOTAL	3.079E+04		2.021E+04		1.477E+04		4.631E+05		3.579E+05		8.983E+05		3.079E+04		2.021E+04		1.477E+04		4.631E+05		6.772E+05		5.499E+05	

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (16)

	PX(I)		VY(I)		VZ(I)		TX(I)		MY(I)		MZ(I)		PX(C)		VY(C)		VZ(C)		TX(C)		MY(C)		MZ(C)	
X		7		3		3		7		7		10		7		3		3		3		7		3
X MAXIMUM	-2.059E+03		2.831E+03		-6.307E+03		-2.069E+05		1.406E+05		-4.319E+04		-2.925E+03		1.648E+03		-6.307E+03		-6.829E+04		2.900E+05		-7.086E+04	
Y		11		11		11		9		11		11		11		11		11		11		11		11
Y MAXIMUM	2.433E+04		9.378E+03		-1.480E+03		-1.146E+05		-3.899E+05		5.484E+05		2.383E+04		-1.057E+04		-1.480E+03		-2.610E+05		-3.348E+05		-5.336E+05	
Z		10		3		3		8		3		10		10		3		3		3		3		10
Z MAXIMUM	-1.940E+03		1.540E+03		-3.430E+03		6.184E+04		-5.472E+04		4.496E+04		-1.883E+03		8.962E+02		-3.430E+03		-3.715E+04		-1.431E+05		4.325E+04	
GRAND TOTAL	2.985E+04		1.320E+04		9.305E+03		4.631E+05		5.499E+05		6.772E+05		2.993E+04		1.306E+04		9.305E+03		2.971E+05		7.877E+05		6.762E+05	

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (16)

	PX(J)		VY(J)		VZ(J)		TX(J)		MY(J)		MZ(J)	
X		3		7		3		3		3		3
X MAXIMUM	2.831E+03		2.059E+03		-6.307E+03		-2.898E+05		-2.716E+05		-8.510E+04	
Y		11		11		11		11		9		11
Y MAXIMUM	9.378E+03		-2.433E+04		-1.480E+03		-4.343E+05		1.543E+05		-9.992E+04	
Z		3		10		3		3		3		3
Z MAXIMUM	1.540E+03		1.940E+03		-3.430E+03		-1.576E+05		-1.477E+05		-4.629E+04	
GRAND TOTAL	1.320E+04		2.985E+04		9.305E+03		7.345E+05		6.837E+05		1.976E+05	

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (17)

	PX(I)		VY(I)		VZ(I)		TX(I)		MY(I)		MZ(I)		PX(J)		VY(J)		VZ(J)		TX(J)		MY(J)		MZ(J)	
X		3		10		3		3		3		3		3		10		3		3		3		2
X MAXIMUM	2.380E+03		-1.733E+03		-4.230E+03		-2.898E+05		-2.716E+05		-8.510E+04		2.380E+03		-1.733E+03		-4.230E+03		-2.898E+05		-3.985E+05		-7.135E+04	
Y		11		11		9		11		9		11		11		11		9		11		9		11
Y MAXIMUM	9.540E+03		-2.166E+04		-1.373E+03		-4.343E+05		1.543E+05		-9.992E+04		9.540E+03		-2.166E+04		-1.373E+03		-4.343E+05		1.131E+05		5.498E+05	
Z		3		10		3		3		3		3		3		10		3		3		3		10
Z MAXIMUM	1.295E+03		1.804E+03		-2.301E+03		-1.576E+05		-1.477E+05		-4.629E+04		1.295E+03		1.804E+03		-2.301E+03		-1.576E+05		-2.167E+05		-4.569E+04	
GRAND TOTAL	1.363E+04		2.692E+04		7.495E+03		7.345E+05		6.837E+05		1.976E+05		1.363E+04		2.692E+04		7.495E+03		7.345E+05		6.519E+05		7.084E+05	

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (18)

	PX(I)		VY(I)		VZ(I)		TX(I)		MY(I)		MZ(I)		PX(J)		VY(J)		VZ(J)		TX(J)		MY(J)		MZ(J)	
X		7		10		7		3		3		3		7		10		7		3		3		10
X MAXIMUM	-2.200E+03		-1.505E+03		-4.970E+03		-2.898E+05		-3.985E+05		-7.135E+04		-2.200E+03		-1.505E+03		-4.970E+03		-2.898E+05		-4.782E+05		8.903E+04	
Y		11		11		9		11		9		11		11		11		9		11		11		11
Y MAXIMUM	9.658E+03		-1.743E+04		-3.012E+03		-4.343E+05		1.131E+05		5.498E+05		9.658E+03		-1.743E+04		-3.012E+03		-4.343E+05		-7.031E+04		1.073E+06	
Z		3		10		8		3		3		10		3		10		8		3		3		10
Z MAXIMUM	1.103E+03		1.567E+03		1.619E+03		-1.576E+05		-2.167E+05		-4.569E+04		1.103E+03		1.567E+03		1.619E+03		-1.576E+05		-2.601E+05		-9.269E+04	
GRAND TOTAL	1.399E+04		2.231E+04		1.200E+04		7.345E+05		6.519E+05		7.084E+05		1.399E+04		2.231E+04		1.200E+04		7.345E+05		5.977E+05		1.354E+06	

ELEMENT TYPE (3/D P I P E) /// ELEMENT NUMBER (19)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	10	7	3	3	10	7	10	7	3	3	10
X MAXIMUM	-2.270E+03	-1.049E+03	-7.476E+03	-2.898E+05	4.782E+05	8.903E+04	-2.270E+03	-1.049E+03	-7.476E+03	-2.898E+05	4.897E+05	1.079E+05
Y	11	11	9	11	11	11	11	11	9	11	9	11
Y MAXIMUM	9.806E+03	-9.208E+03	-4.551E+03	-4.343E+05	7.031E+04	1.073E+06	9.806E+03	-9.208E+03	-4.551E+03	-4.343E+05	5.912E+04	1.239E+06
Z	8	10	8	3	3	10	8	10	8	3	3	10
Z MAXIMUM	1.139E+03	1.093E+03	2.359E+03	-1.576E+05	-2.601E+05	-9.269E+04	1.139E+03	1.093E+03	2.359E+03	-1.576E+05	-2.664E+05	-1.124E+05
GRAND TOTAL	1.450E+04	1.356E+04	1.743E+04	7.345E+05	5.977E+05	1.354E+06	1.450E+04	1.356E+04	1.743E+04	7.345E+05	6.438E+05	1.592E+06

ELEMENT TYPE (3/D P I P E) /// ELEMENT NUMBER (20)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	3	7	3	3	10	7	3	7	3	3	10
X MAXIMUM	-2.357E+03	-5.194E+02	-9.775E+03	-2.898E+05	4.897E+05	1.079E+05	-2.357E+03	-5.194E+02	-9.775E+03	-2.898E+05	4.578E+05	1.149E+05
Y	11	11	9	11	9	11	11	11	9	11	9	11
Y MAXIMUM	9.990E+03	2.654E+03	-5.962E+03	-4.343E+05	5.912E+04	1.239E+06	9.990E+03	2.654E+03	-5.962E+03	-4.343E+05	1.664E+05	1.191E+06
Z	8	5	8	3	3	10	8	5	8	3	3	10
Z MAXIMUM	1.255E+03	-4.144E+02	3.031E+03	-1.576E+05	-2.664E+05	-1.124E+05	1.255E+03	-4.144E+02	3.031E+03	-1.576E+05	-2.490E+05	-1.197E+05
GRAND TOTAL	1.519E+04	5.674E+03	2.295E+04	7.345E+05	6.438E+05	1.592E+06	1.519E+04	5.674E+03	2.295E+04	7.345E+05	8.401E+05	1.602E+06

ELEMENT TYPE (3/D P I P E) /// ELEMENT NUMBER (21)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	7	7	3	3	10	7	7	7	3	7	10
X MAXIMUM	-2.452E+03	-7.985E+02	-1.133E+04	-2.898E+05	4.578E+05	1.149E+05	-2.452E+03	-7.985E+02	-1.133E+04	-2.898E+05	-9.512E+05	9.019E+04
Y	11	11	9	11	9	11	11	11	9	11	9	10
Y MAXIMUM	1.019E+04	1.692E+04	-6.920E+03	-4.343E+05	1.664E+05	1.191E+06	1.019E+04	1.692E+04	-6.920E+03	-4.343E+05	-5.889E+05	4.766E+05
Z	12	10	8	3	3	10	12	10	8	3	8	10
Z MAXIMUM	-1.421E+03	-4.219E+02	3.481E+03	-1.576E+05	-2.490E+05	-1.197E+05	-1.421E+03	-4.219E+02	3.481E+03	-1.576E+05	3.061E+05	-9.390E+04
GRAND TOTAL	1.600E+04	1.794E+04	2.705E+04	7.345E+05	8.401E+05	1.602E+06	1.600E+04	1.794E+04	2.705E+04	7.345E+05	2.259E+06	9.217E+05

ELEMENT TYPE (3/D P I P E) /// ELEMENT NUMBER (22)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	7	7	3	7	10	7	7	7	3	7	10
X MAXIMUM	-2.514E+03	-1.116E+03	-1.070E+04	-2.898E+05	-9.512E+05	9.019E+04	-2.514E+03	-1.116E+03	-1.070E+04	-2.898E+05	-1.133E+06	7.351E+04
Y	11	11	9	11	9	10	11	11	9	11	9	4
Y MAXIMUM	1.030E+04	2.816E+04	-6.557E+03	-4.343E+05	-5.889E+05	4.766E+05	1.030E+04	2.816E+04	-6.557E+03	-4.343E+05	-7.004E+05	4.277E+05
Z	12	10	8	3	8	10	12	10	8	3	8	10
Z MAXIMUM	-1.660E+03	-1.021E+03	3.307E+03	-1.576E+05	3.061E+05	-9.390E+04	-1.660E+03	-1.021E+03	3.307E+03	-1.576E+05	3.623E+05	-7.653E+04
GRAND TOTAL	1.661E+04	2.953E+04	2.602E+04	7.345E+05	2.259E+06	9.217E+05	1.661E+04	2.953E+04	2.602E+04	7.345E+05	2.676E+06	8.796E+05

ELEMENT TYPE (3/D P I P E) /// ELEMENT NUMBER (23)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	3	7	3	10	3	7	3	7	3	10	3	7
X MAXIMUM	1.444E+04	-2.109E+03	-7.533E+03	8.551E+04	-1.653E+06	-1.614E+05	1.444E+04	-2.109E+03	-7.533E+03	8.551E+04	-1.781E+06	-1.255E+05
Y	9	11	11	4	9	11	9	11	11	4	9	11
Y MAXIMUM	-3.726E+03	4.977E+04	-9.798E+03	4.619E+05	-6.688E+05	3.672E+06	-3.726E+03	4.977E+04	-9.798E+03	4.619E+05	-6.432E+05	2.826E+06
Z	5	5	5	10	3	10	5	5	5	10	3	10
Z MAXIMUM	9.588E+03	2.322E+03	-4.549E+03	-8.903E+04	-8.993E+05	-1.496E+05	9.588E+03	2.322E+03	-4.549E+03	-8.903E+04	-9.690E+05	-1.176E+05
GRAND TOTAL	2.537E+04	5.247E+04	2.118E+04	9.709E+05	3.195E+06	3.915E+06	2.537E+04	5.247E+04	2.118E+04	9.709E+05	3.160E+06	3.031E+06

ELEMENT TYPE (3/D P I P E) /// ELEMENT NUMBER (24)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	3	7	3	10	3	7	3	7	3	10	3	7
X MAXIMUM	1.503E+04	-2.269E+03	-7.378E+03	8.551E+04	-1.781E+06	-1.255E+05	1.503E+04	-2.269E+03	-7.378E+03	8.551E+04	-1.907E+06	-8.681E+04
Y	9	11	11	4	9	11	9	11	11	4	9	11
Y MAXIMUM	-3.451E+03	5.523E+04	-9.836E+03	4.619E+05	-6.432E+05	2.826E+06	-3.451E+03	5.523E+04	-9.836E+03	4.619E+05	-6.166E+05	1.884E+06
Z	5	5	5	10	3	10	5	5	5	10	3	10
Z MAXIMUM	9.614E+03	2.468E+03	-4.581E+03	-8.903E+04	-9.690E+05	-1.176E+05	9.614E+03	2.468E+03	-4.581E+03	-8.903E+04	-1.037E+06	-8.026E+04
GRAND TOTAL	2.530E+04	5.844E+04	2.130E+04	9.709E+05	3.160E+06	3.031E+06	2.530E+04	5.844E+04	2.130E+04	9.709E+05	3.148E+06	2.050E+06

ELEMENT TYPE (3/D P I P E) /// ELEMENT NUMBER (25)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	3	3	10	10	7	3	3	3	10	10	10	12
X MAXIMUM	1.630E+04	-6.820E+04	2.656E+03	8.551E+04	8.681E+04	-1.907E+06	-3.670E+04	-5.975E+04	2.656E+03	3.396E+04	-4.737E+04	3.544E+05
Y	9	9	11	4	11	9	9	9	11	11	4	8
Y MAXIMUM	-2.853E+03	-2.961E+04	6.331E+04	4.619E+05	-1.884E+06	-6.166E+05	-2.295E+04	-1.892E+04	6.331E+04	-8.429E+05	-5.449E+05	-1.250E+05
Z	5	3	10	10	10	3	3	3	10	10	10	12
Z MAXIMUM	9.671E+03	-3.709E+04	-2.765E+03	-8.903E+04	8.026E+04	-1.037E+06	-1.996E+04	3.250E+04	-2.765E+03	-3.536E+04	4.932E+04	2.777E+05
GRAND TOTAL	2.537E+04	1.313E+05	6.760E+04	9.709E+05	2.050E+06	3.148E+06	9.255E+04	9.618E+04	6.760E+04	9.786E+05	8.247E+05	6.953E+05

ELEMENT TYPE (3/D P I P E) /// ELEMENT NUMBER (25)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	3	3	10	10	7	3
X MAXIMUM	-6.820E+04	-1.630E+04	2.656E+03	1.852E+04	-4.447E+04	1.135E+06
Y	9	9	11	11	11	9
Y MAXIMUM	-2.961E+04	2.853E+03	6.331E+04	3.953E+05	2.531E+06	3.464E+05
Z	3	5	10	5	5	3
Z MAXIMUM	-3.709E+04	-9.671E+03	-2.765E+03	3.270E+04	4.032E+04	6.171E+05
GRAND TOTAL	1.313E+05	2.537E+04	6.760E+04	5.828E+05	2.618E+06	1.866E+06

ELEMENT TYPE (3/D P I P E) /// ELEMENT NUMBER (26)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	3	10	12	10	3	7	3	10	12	10	3	7
X MAXIMUM	-6.635E+04	1.834E+03	-1.319E+04	1.852E+04	1.135E+06	4.447E+04	-6.635E+04	1.834E+03	-1.319E+04	1.852E+04	1.349E+06	1.158E+05
Y	9	11	8	11	9	11	9	11	8	11	9	10
Y MAXIMUM	-2.854E+04	-5.961E+04	3.651E+03	3.953E+05	3.464E+05	-2.531E+06	-2.854E+04	-5.961E+04	3.651E+03	3.953E+05	2.205E+05	5.284E+05
Z	3	10	12	5	3	5	3	10	12	5	3	10
Z MAXIMUM	-3.609E+04	-1.910E+03	-1.033E+04	3.270E+04	6.171E+05	-4.032E+04	-3.609E+04	-1.910E+03	-1.033E+04	3.270E+04	7.335E+05	1.041E+05
GRAND TOTAL	1.269E+05	6.535E+04	2.541E+04	5.828E+05	1.866E+06	2.618E+06	1.269E+05	6.535E+04	2.541E+04	5.828E+05	1.804E+06	1.076E+06

ELEMENT TYPE (3/D P I P E) /// ELEMENT NUMBER (27)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	3	10	12	10	3	7	3	10	12	10	3	7
X MAXIMUM	-6.464E+04	1.333E+03	-1.074E+04	1.852E+04	1.349E+06	1.158E+05	-6.464E+04	1.333E+03	-1.074E+04	1.852E+04	1.485E+06	1.631E+05
Y	9	11	8	11	9	10	9	11	8	11	11	11
Y MAXIMUM	-2.752E+04	-4.834E+04	3.398E+03	3.953E+05	2.205E+05	5.284E+05	-2.752E+04	-4.834E+04	3.398E+03	3.953E+05	1.389E+05	2.661E+06
Z	3	10	12	5	3	10	3	10	12	5	3	10
Z MAXIMUM	-3.516E+04	-1.388E+03	-8.413E+03	3.270E+04	7.335E+05	1.041E+05	-3.516E+04	-1.388E+03	-8.413E+03	3.270E+04	8.079E+05	1.693E+05
GRAND TOTAL	1.226E+05	5.313E+04	2.095E+04	5.828E+05	1.804E+06	1.076E+06	1.226E+05	5.313E+04	2.095E+04	5.828E+05	2.125E+06	3.312E+06

ELEMENT TYPE (3/D P I P E) /// ELEMENT NUMBER (28)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	3	10	12	10	3	7	3	10	12	10	3	10
X MAXIMUM	-6.294E+04	4.910E+02	-6.111E+03	1.852E+04	1.485E+06	1.631E+05	-6.294E+04	4.910E+02	-6.111E+03	1.852E+04	1.512E+06	-1.857E+05
Y	9	11	8	11	11	11	9	11	8	11	11	11
Y MAXIMUM	-2.648E+04	-2.726E+04	2.770E+03	3.953E+05	1.389E+05	2.661E+06	-2.648E+04	-2.726E+04	2.770E+03	3.953E+05	1.998E+05	3.943E+06
Z	3	10	12	5	3	10	3	10	12	5	3	10
Z MAXIMUM	-3.423E+04	-5.112E+02	-4.789E+03	3.270E+04	8.079E+05	1.693E+05	-3.423E+04	-5.112E+02	-4.789E+03	3.270E+04	8.225E+05	1.934E+05
GRAND TOTAL	1.184E+05	3.103E+04	1.294E+04	5.828E+05	2.125E+06	3.312E+06	1.184E+05	3.103E+04	1.294E+04	5.828E+05	2.456E+06	4.717E+06

ELEMENT TYPE (3/D P I P E) /// ELEMENT NUMBER (29)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	3	7	2	10	3	10	3	7	2	10	3	10
X MAXIMUM	-6.120E+04	5.985E+02	-4.041E+03	1.852E+04	1.512E+06	-1.857E+05	-6.120E+04	5.985E+02	-4.041E+03	1.852E+04	1.410E+06	-1.618E+05
Y	9	4	9	11	11	11	9	4	9	11	8	11
Y MAXIMUM	-2.540E+04	9.290E+03	-2.396E+03	3.953E+05	1.998E+05	3.943E+06	-2.540E+04	9.290E+03	-2.396E+03	3.953E+05	2.533E+05	3.957E+06
Z	3	10	8	5	3	10	3	10	8	5	3	10
Z MAXIMUM	-3.329E+04	5.301E+02	1.522E+03	3.270E+04	8.225E+05	1.934E+05	-3.329E+04	5.301E+02	1.522E+03	3.270E+04	7.671E+05	1.684E+05
GRAND TOTAL	1.140E+05	1.079E+04	9.121E+03	5.828E+05	2.456E+06	4.717E+06	1.140E+05	1.079E+04	9.121E+03	5.828E+05	2.473E+06	4.839E+06

ELEMENT TYPE (3/D P I P E) /// ELEMENT NUMBER (30)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	3	10	12	10	3	10	3	10	12	10	3	10
X MAXIMUM	-5.944E+04	-1.447E+03	5.726E+03	1.852E+04	1.410E+06	-1.618E+05	-5.944E+04	-1.447E+03	5.726E+03	1.852E+04	1.185E+06	-9.379E+04
Y	9	11	9	11	8	11	9	11	9	11	8	11
Y MAXIMUM	-2.428E+04	2.636E+04	-1.912E+03	3.953E+05	2.533E+05	3.957E+06	-2.428E+04	2.636E+04	-1.912E+03	3.953E+05	2.858E+05	2.718E+06
Z	3	10	12	5	3	10	3	10	12	5	3	10
Z MAXIMUM	-3.233E+04	1.506E+03	4.487E+03	3.270E+04	7.671E+05	1.684E+05	-3.233E+04	1.506E+03	4.487E+03	3.270E+04	6.445E+05	9.764E+04
GRAND TOTAL	1.094E+05	3.058E+04	1.426E+04	5.828E+05	2.473E+06	4.839E+06	1.094E+05	3.058E+04	1.426E+04	5.828E+05	2.095E+06	3.817E+06

ELEMENT TYPE (3/D P I P E) /// ELEMENT NUMBER (31)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	3	10	12	10	3	10	3	10	12	10	3	10
X MAXIMUM	-5.761E+04	-2.145E+03	1.028E+04	1.852E+04	1.185E+06	-9.379E+04	-5.761E+04	-2.145E+03	1.028E+04	1.852E+04	9.989E+05	-3.586E+04
Y	9	11	11	11	8	11	9	11	11	11	8	4
Y MAXIMUM	-2.310E+04	4.698E+04	-2.428E+03	3.953E+05	2.858E+05	2.718E+06	-2.310E+04	4.698E+04	-2.428E+03	3.953E+05	2.774E+05	-2.365E+06
Z	3	10	12	5	3	10	3	10	12	5	3	8
Z MAXIMUM	-3.134E+04	2.234E+03	8.060E+03	3.270E+04	6.445E+05	9.764E+04	-3.134E+04	2.234E+03	8.060E+03	3.270E+04	5.433E+05	-4.377E+04
GRAND TOTAL	1.047E+05	5.190E+04	2.070E+04	5.828E+05	2.095E+06	3.817E+06	1.047E+05	5.190E+04	2.070E+04	5.828E+05	1.752E+06	2.956E+06

ELEMENT TYPE (3/D P I P E) /// ELEMENT NUMBER (32)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	3	10	12	10	3	10	3	10	12	10	2	7
X MAXIMUM	-5.573E+04	-2.661E+03	1.370E+04	1.852E+04	9.989E+05	-3.586E+04	-5.573E+04	-2.661E+03	1.370E+04	1.852E+04	-9.742E+05	-3.743E+04
Y	9	11	11	11	8	4	9	11	11	11	9	4
Y MAXIMUM	-2.188E+04	6.245E+04	-3.194E+03	3.953E+05	2.774E+05	-2.365E+06	-2.188E+04	6.245E+04	-3.194E+03	3.953E+05	-2.941E+05	-2.390E+06
Z	3	10	12	5	3	8	3	10	12	5	3	10
Z MAXIMUM	-3.031E+04	2.770E+03	1.074E+04	3.270E+04	5.433E+05	-4.377E+04	-3.031E+04	2.770E+03	1.074E+04	3.270E+04	4.182E+05	-3.746E+04
GRAND TOTAL	9.984E+04	6.825E+04	2.654E+04	5.828E+05	1.752E+06	2.956E+06	9.984E+04	6.825E+04	2.654E+04	5.828E+05	1.589E+06	2.578E+06

ELEMENT TYPE (3/D P I P E) /// ELEMENT NUMBER (33)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	3	10	12	10	2	7	3	10	12	10	2	10
X MAXIMUM	-5.393E+04	-2.957E+03	1.571E+04	1.852E+04	-9.742E+05	-3.743E+04	-5.393E+04	-2.957E+03	1.571E+04	1.852E+04	-1.035E+06	1.691E+05
Y	9	11	11	11	9	4	9	11	11	11	9	11
Y MAXIMUM	-2.070E+04	7.155E+04	-3.642E+03	3.953E+05	-2.941E+05	-2.390E+06	-2.070E+04	7.155E+04	-3.642E+03	3.953E+05	-3.167E+05	-3.456E+06
Z	3	10	12	5	3	10	3	10	12	5	12	10
Z MAXIMUM	-2.933E+04	3.079E+03	1.231E+04	3.270E+04	4.182E+05	-3.746E+04	-2.933E+04	3.079E+03	1.231E+04	3.270E+04	6.014E+05	-1.760E+05
GRAND TOTAL	9.516E+04	7.794E+04	3.002E+04	5.828E+05	1.589E+06	2.578E+06	9.516E+04	7.794E+04	3.002E+04	5.828E+05	2.086E+06	4.556E+06

ELEMENT TYPE (3/D P I P E) /// ELEMENT NUMBER (34)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	3	10	2	10	2	10	3	10	2	10	3	10
X MAXIMUM	-5.118E+04	1.013E+03	1.441E+04	1.852E+04	-1.035E+06	1.691E+05	-5.118E+04	1.013E+03	1.441E+04	1.852E+04	-8.621E+05	7.181E+04
Y	9	4	9	11	9	11	9	4	9	11	8	11
Y MAXIMUM	-1.889E+04	-3.751E+04	6.091E+03	3.953E+05	-3.167E+05	-3.456E+06	-1.889E+04	-3.751E+04	6.091E+03	3.953E+05	-3.039E+05	-1.848E+06
Z	3	10	3	5	12	10	3	10	3	5	3	8
Z MAXIMUM	-2.784E+04	-1.055E+03	-6.806E+03	3.270E+04	6.014E+05	-1.760E+05	-2.784E+04	-1.055E+03	-6.806E+03	3.270E+04	-4.689E+05	7.752E+04
GRAND TOTAL	8.805E+04	4.394E+04	2.802E+04	5.828E+05	2.086E+06	4.556E+06	8.805E+04	4.394E+04	2.802E+04	5.828E+05	1.534E+06	2.452E+06

ELEMENT TYPE (3/D P I P E) /// ELEMENT NUMBER (35)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	3	10	2	10	3	10	3	10	2	10	3	10
X MAXIMUM	-4.734E+04	1.173E+03	1.126E+04	1.852E+04	-8.621E+05	7.181E+04	-4.734E+04	1.173E+03	1.126E+04	1.852E+04	-1.607E+06	-4.081E+04
Y	9	4	9	11	8	11	9	4	9	11	9	4
Y MAXIMUM	-1.630E+04	-2.702E+04	2.985E+03	3.953E+05	-3.039E+05	-1.848E+06	-1.630E+04	-2.702E+04	2.985E+03	3.953E+05	5.545E+05	3.836E+06
Z	3	10	12	5	3	8	3	10	12	5	3	10
Z MAXIMUM	-2.575E+04	-1.221E+03	-4.442E+03	3.270E+04	4.689E+05	7.752E+04	-2.575E+04	-1.221E+03	-4.442E+03	3.270E+04	-8.739E+05	4.249E+04
GRAND TOTAL	7.808E+04	3.959E+04	2.023E+04	5.828E+05	1.534E+06	2.452E+06	7.808E+04	3.959E+04	2.023E+04	5.828E+05	2.793E+06	4.121E+06

ELEMENT TYPE (3/D P I P E) /// ELEMENT NUMBER (36)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	3	10	2	10	3	10	3	10	2	10	2	10
X MAXIMUM	-4.439E+04	8.808E+02	7.026E+03	1.852E+04	-1.607E+06	-4.081E+04	-4.439E+04	8.808E+02	7.026E+03	1.852E+04	1.769E+06	-8.348E+04
Y	9	11	11	11	9	4	9	11	11	11	9	4
Y MAXIMUM	-1.427E+04	-2.036E+04	1.013E+03	3.953E+05	5.545E+05	3.836E+06	-1.427E+04	-2.036E+04	1.013E+03	3.953E+05	5.529E+05	4.498E+06
Z	3	10	12	5	3	10	3	10	12	5	3	10
Z MAXIMUM	-2.414E+04	-9.170E+02	-3.441E+03	3.270E+04	-8.739E+05	4.249E+04	-2.414E+04	-9.170E+02	-3.441E+03	3.270E+04	-9.357E+05	8.691E+04
GRAND TOTAL	7.046E+04	2.700E+04	1.128E+04	5.828E+05	2.793E+06	4.121E+06	7.046E+04	2.700E+04	1.128E+04	5.828E+05	3.191E+06	5.076E+06

ELEMENT TYPE (3/D P I P E) /// ELEMENT NUMBER (37)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	3	10	3	10	3	10	3	10	3	10	3	10
X MAXIMUM	3.453E+03	4.246E+02	7.443E+03	1.094E-10	-5.329E+05	2.910E+04	3.453E+03	4.246E+02	7.443E+03	1.094E-10	-1.607E+05	7.866E+03
Y	9	4	9	4	9	4	9	4	9	4	9	4
Y MAXIMUM	2.433E+03	-1.813E+04	-5.252E+03	-6.023E-09	3.929E+05	-1.290E+06	2.433E+03	-1.813E+04	-5.252E+03	-6.023E-09	1.304E+05	-3.836E+05
Z	3	10	3	5	8	10	3	10	3	5	8	10
Z MAXIMUM	1.878E+03	-4.421E+02	4.048E+03	3.703E-10	-2.924E+05	-3.029E+04	1.878E+03	-4.421E+02	4.048E+03	3.703E-10	-9.807E+04	-8.189E+03
GRAND TOTAL	9.885E+03	2.073E+04	1.742E+04	6.714E-09	1.273E+06	1.463E+06	9.885E+03	2.073E+04	1.742E+04	6.714E-09	4.030E+05	4.296E+05

ELEMENT TYPE (3/D P I P E) /// ELEMENT NUMBER (38)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	3	10	3	10	3	10	3	10	3	10	3	10
X MAXIMUM	1.402E+03	1.640E+02	3.351E+03	1.666E-10	-1.607E+05	7.866E+03	1.402E+03	1.640E+02	3.351E+03	1.666E-10	-6.555E+03	3.199E+02
Y	9	4	9	4	9	4	9	4	9	4	9	4
Y MAXIMUM	1.015E+03	-8.001E+03	-2.708E+03	-3.757E-09	1.304E+05	-3.836E+05	1.015E+03	-8.001E+03	-2.708E+03	-3.757E-09	5.808E+03	-1.555E+04
Z	3	10	8	5	8	10	3	10	8	5	8	10
Z MAXIMUM	7.624E+02	-1.708E+02	2.037E+03	2.183E-10	-9.807E+04	-8.189E+03	7.624E+02	-1.708E+02	2.037E+03	2.183E-10	-4.387E+03	-3.331E+02
GRAND TOTAL	4.106E+03	8.959E+03	8.384E+03	6.508E-09	4.030E+05	4.296E+05	4.106E+03	8.959E+03	8.384E+03	6.508E-09	1.738E+04	1.747E+04

ELEMENT TYPE (3/D P I P E) /// ELEMENT NUMBER (39)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	10	3	10	3	10	7	10	3	10	2	9
X MAXIMUM	1.952E+02	2.666E+01	5.463E+02	-6.695E-10	-6.555E+03	3.199E+02	1.952E+02	2.666E+01	5.463E+02	-6.695E-10	-2.289E-08	-1.610E-10
Y	9	4	9	4	9	4	9	4	9	4	9	4
Y MAXIMUM	1.576E+02	-1.296E+03	-4.840E+02	2.045E-08	5.808E+03	-1.555E+04	1.576E+02	-1.296E+03	-4.840E+02	2.045E-08	-5.044E-09	-2.383E-08
Z	12	10	8	10	8	10	12	10	8	10	2	5
Z MAXIMUM	1.199E+02	-2.775E+01	3.656E+02	6.223E-10	-4.387E+03	-3.331E+02	1.199E+02	-2.775E+01	3.656E+02	6.223E-10	7.103E-09	-6.445E-10
GRAND TOTAL	6.162E+02	1.456E+03	1.448E+03	2.122E-08	1.738E+04	1.747E+04	6.162E+02	1.456E+03	1.448E+03	2.122E-08	2.721E-08	2.525E-08

ELEMENT TYPE (3/D P I P E) /// ELEMENT NUMBER (40)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	3	9	3	10	2	10	3	9	3	10	2	7
X MAXIMUM	-3.763E+04	1.776E+02	1.075E+04	1.852E+04	1.376E+06	-5.438E+04	-3.763E+04	1.776E+02	1.075E+04	1.852E+04	1.174E+06	5.366E+04
Y	9	4	9	11	9	4	9	4	9	11	8	4
Y MAXIMUM	-9.558E+03	1.916E+04	-7.473E+03	3.953E+05	1.599E+05	3.207E+06	-9.558E+03	1.916E+04	-7.473E+03	3.953E+05	3.064E+05	2.066E+06
Z	3	9	8	5	3	10	3	9	8	5	2	8
Z MAXIMUM	-2.047E+04	-5.080E+02	5.898E+03	3.270E+04	-6.459E+05	5.662E+04	-2.047E+04	-5.080E+02	5.898E+03	3.270E+04	-3.613E+05	-6.423E+04
GRAND TOTAL	5.362E+04	2.056E+04	2.220E+04	5.828E+05	2.108E+06	3.647E+06	5.362E+04	2.056E+04	2.220E+04	5.828E+05	1.707E+06	2.777E+06

ELEMENT TYPE (3/D P I P E) /// ELEMENT NUMBER (41)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	3	10	3	10	2	7	3	10	3	10	2	7
X MAXIMUM	-3.513E+04	-3.883E+02	1.382E+04	1.852E+04	1.174E+06	5.366E+04	-3.513E+04	-3.883E+02	1.382E+04	1.852E+04	7.845E+05	3.662E+04
Y	9	4	9	11	8	4	9	4	9	11	9	11
Y MAXIMUM	-7.827E+03	2.780E+04	-7.425E+03	3.953E+05	3.064E+05	2.066E+06	-7.827E+03	2.780E+04	-7.425E+03	3.953E+05	-7.307E+05	8.750E+05
Z	3	9	3	5	2	8	3	9	3	5	8	8
Z MAXIMUM	-1.911E+04	-4.109E+02	7.519E+03	3.270E+04	-3.613E+05	-6.423E+04	-1.911E+04	-4.109E+02	7.519E+03	3.270E+04	5.972E+05	-7.320E+04
GRAND TOTAL	4.786E+04	2.997E+04	2.536E+04	5.828E+05	1.707E+06	2.777E+06	4.786E+04	2.997E+04	2.536E+04	5.828E+05	2.093E+06	1.533E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (42)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	3	10	3	10	2	7	3	10	3	10	3	9
X MAXIMUM	-3.284E+04	-6.018E+02	1.521E+04	1.852E+04	7.845E+05	3.662E+04	-3.284E+04	-6.018E+02	1.521E+04	1.852E+04	1.012E+06	-2.528E+04
Y	9	4	9	11	9	11	9	4	9	11	9	4
Y MAXIMUM	-6.244E+03	3.215E+04	-6.449E+03	3.953E+05	-7.307E+05	8.750E+05	-6.244E+03	3.215E+04	-6.449E+03	3.953E+05	-1.040E+06	-1.145E+06
Z	3	10	3	5	8	8	3	10	3	5	8	9
Z MAXIMUM	-1.786E+04	6.266E+02	8.270E+03	3.270E+04	5.972E+05	-7.320E+04	-1.786E+04	6.266E+02	8.270E+03	3.270E+04	8.251E+05	7.230E+04
GRAND TOTAL	4.293E+04	3.606E+04	2.614E+04	5.828E+05	2.093E+06	1.533E+06	4.293E+04	3.606E+04	2.614E+04	5.828E+05	2.810E+06	1.529E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (43)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	3	10	3	10	3	9	3	10	3	10	3	9
X MAXIMUM	-3.131E+04	-6.507E+02	1.545E+04	1.852E+04	1.012E+06	-2.528E+04	-3.131E+04	-6.507E+02	1.545E+04	1.852E+04	1.383E+06	-2.733E+04
Y	9	4	9	11	9	4	9	4	9	11	9	4
Y MAXIMUM	-5.182E+03	3.306E+04	-6.010E+03	3.953E+05	-1.040E+06	-1.145E+06	-5.182E+03	3.306E+04	-6.010E+03	3.953E+05	-1.184E+06	-1.939E+06
Z	3	10	3	5	8	9	3	10	3	5	8	9
Z MAXIMUM	-1.703E+04	6.774E+02	8.405E+03	3.270E+04	8.251E+05	7.230E+04	-1.703E+04	6.774E+02	8.405E+03	3.270E+04	9.300E+05	7.818E+04
GRAND TOTAL	3.987E+04	3.750E+04	2.605E+04	5.828E+05	2.810E+06	1.529E+06	3.987E+04	3.750E+04	2.605E+04	5.828E+05	3.244E+06	2.201E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (44)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X	3	2	3	10	9	3	3	3	3	9	10	3
X MAXIMUM	-2.958E+04	1.570E+04	-4.345E+02	1.852E+04	2.733E+04	1.383E+06	-1.606E+04	2.577E+04	-4.345E+02	2.299E+04	-2.172E+04	8.964E+05
Y	9	9	4	11	4	9	9	9	4	4	4	8
Y MAXIMUM	-3.989E+03	-5.881E+04	-3.650E+04	3.953E+05	1.939E+06	-1.184E+06	-4.440E+04	-3.876E+04	-3.650E+04	7.677E+05	6.599E+05	-2.864E+05
Z	3	8	5	5	9	8	8	8	5	9	9	3
Z MAXIMUM	-1.609E+04	4.734E+04	5.190E+02	3.270E+04	-7.818E+04	9.300E+05	3.572E+04	3.123E+04	5.190E+02	-6.575E+04	-5.571E+04	4.875E+05
GRAND TOTAL	3.703E+04	1.487E+05	4.010E+04	5.828E+05	2.201E+06	3.244E+06	1.132E+05	1.033E+05	4.010E+04	1.155E+06	1.005E+06	1.385E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (44)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	2	3	3	9	10	2
X MAXIMUM	1.570E+04	2.958E+04	-4.345E+02	3.114E+04	-1.573E+04	-6.537E+05
Y	9	9	4	9	4	9
Y MAXIMUM	-5.881E+04	3.989E+03	-3.650E+04	8.681E+05	-1.005E+06	7.889E+05
Z	8	3	5	9	10	8
Z MAXIMUM	4.734E+04	1.609E+04	5.190E+02	-8.908E+04	1.638E+04	-6.600E+05
GRAND TOTAL	1.487E+05	3.703E+04	4.010E+04	1.273E+06	1.119E+06	2.259E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (45)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	2	3	3	9	2	10	2	3	3	9	3	4
X MAXIMUM	1.464E+04	-4.018E+02	-2.598E+04	3.114E+04	-6.537E+05	1.573E+04	1.464E+04	-4.018E+02	-2.598E+04	3.114E+04	-1.721E+06	-3.060E+04
Y	9	4	8	9	9	4	9	4	8	9	9	4
Y MAXIMUM	-5.583E+04	-3.437E+04	4.715E+03	8.681E+05	7.889E+05	1.005E+06	-5.583E+04	-3.437E+04	4.715E+03	8.681E+05	4.779E+05	3.377E+06
Z	8	5	3	9	8	10	8	5	3	9	3	9
Z MAXIMUM	4.496E+04	5.063E+02	-1.413E+04	-8.908E+04	-6.600E+05	-1.638E+04	4.496E+04	5.063E+02	-1.413E+04	-8.908E+04	-9.363E+05	2.969E+04
GRAND TOTAL	1.412E+05	3.748E+04	3.428E+04	1.273E+06	2.259E+06	1.119E+06	1.412E+05	3.748E+04	3.428E+04	1.273E+06	2.602E+06	3.649E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (46)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PY(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	2	3	3	9	3	4	2	3	3	9	3	3
X MAXIMUM	1.362E+04	-3.299E+02	-2.053E+04	3.114E+04	1.721E+06	-3.060E+04	1.362E+04	-3.299E+02	-2.053E+04	3.114E+04	-2.276E+06	3.871E+04
Y	9	4	8	9	9	4	9	4	8	9	9	4
Y MAXIMUM	-5.287E+04	-2.776E+04	5.627E+03	8.681E+05	4.779E+05	3.377E+06	-5.287E+04	-2.776E+04	5.627E+03	8.681E+05	3.350E+05	4.127E+06
Z	8	5	3	9	3	9	8	5	3	9	3	8
Z MAXIMUM	4.259E+04	4.369E+02	-1.116E+04	-8.908E+04	-9.363E+05	2.969E+04	4.259E+04	4.369E+02	-1.116E+04	-8.908E+04	-1.238E+06	-3.788E+04
GRAND TOTAL	1.337E+05	3.014E+04	2.977E+04	1.273E+06	2.602E+06	3.649E+06	1.337E+05	3.014E+04	2.977E+04	1.273E+06	3.067E+06	4.654E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (47)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X												
X MAXIMUM	1.120E+04	-2.384E+02	-8.088E+03	2.406E+04	-2.322E+06	3.871E+04	1.120E+04	-2.384E+02	-8.088E+03	2.406E+04	-2.540E+06	4.244E+04
Y												
Y MAXIMUM	-4.709E+04	-1.159E+04	6.814E+03	6.708E+05	4.538E+05	4.127E+06	-4.709E+04	-1.159E+04	6.814E+03	6.708E+05	2.803E+05	4.440E+06
Z												
Z MAXIMUM	3.812E+04	7.422E+02	5.748E+03	-6.883E+04	-1.263E+06	-3.788E+04	3.812E+04	7.422E+02	5.748E+03	-6.883E+04	-1.382E+06	-5.792E+04
GRAND TOTAL	1.200E+05	1.576E+04	2.244E+04	1.022E+06	3.224E+06	4.454E+06	1.200E+05	1.576E+04	2.244E+04	1.022E+06	3.364E+06	4.803E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (48)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X												
X MAXIMUM	-7.462E+03	-1.966E+02	-1.573E+03	1.252E-10	5.663E+04	-7.079E+03	-7.462E+03	-1.966E+02	-1.573E+03	1.252E-10	-1.639E-08	6.750E-10
Y												
Y MAXIMUM	-7.126E+02	-9.656E+03	3.300E+03	3.821E-09	-1.188E+05	-3.476E+05	-7.126E+02	-9.656E+03	3.300E+03	3.821E-09	-7.252E-08	-5.238E-08
Z												
Z MAXIMUM	-4.059E+03	5.624E+02	-2.486E+03	4.576E-10	8.950E+04	2.025E+04	-4.059E+03	5.624E+02	-2.486E+03	4.576E-10	1.512E-08	1.216E-09
GRAND TOTAL	9.527E+03	1.332E+04	8.645E+03	5.385E-09	3.112E+05	4.795E+05	9.527E+03	1.332E+04	8.645E+03	5.385E-09	1.006E-07	7.479E-08

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (49)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X												
X MAXIMUM	1.002E+04	1.881E+02	3.950E+03	2.406E+04	-2.540E+06	4.244E+04	1.002E+04	1.881E+02	3.950E+03	2.406E+04	-2.582E+06	4.457E+04
Y												
Y MAXIMUM	-4.359E+04	3.624E+03	7.028E+03	6.708E+05	2.803E+05	4.440E+06	-4.359E+04	3.624E+03	7.028E+03	6.708E+05	2.786E+05	4.526E+06
Z												
Z MAXIMUM	3.531E+04	4.095E+02	5.928E+03	-6.883E+04	-1.382E+06	-5.792E+04	3.531E+04	4.095E+02	5.928E+03	-6.883E+04	-1.404E+06	-8.741E+04
GRAND TOTAL	1.112E+05	7.141E+03	2.077E+04	1.022E+06	3.364E+06	4.803E+06	1.112E+05	7.141E+03	2.077E+04	1.022E+06	3.434E+06	4.944E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (50)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X												
X MAXIMUM	8.475E+03	-1.235E+02	9.267E+03	2.406E+04	-2.582E+06	4.457E+04	8.475E+03	-1.235E+02	9.267E+03	2.406E+04	-1.914E+06	3.575E+04
Y												
Y MAXIMUM	-3.893E+04	1.363E+04	-5.544E+03	6.708E+05	2.786E+05	4.526E+06	-3.893E+04	1.363E+04	-5.544E+03	6.708E+05	6.740E+05	3.544E+06
Z												
Z MAXIMUM	3.159E+04	2.663E+02	5.041E+03	-6.883E+04	-1.404E+06	-8.741E+04	3.159E+04	2.663E+02	5.041E+03	-6.883E+04	-1.041E+06	-7.119E+04
GRAND TOTAL	9.959E+04	1.529E+04	1.965E+04	1.022E+06	3.434E+06	4.944E+06	9.959E+04	1.529E+04	1.965E+04	1.022E+06	3.222E+06	3.889E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (51)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X												
X MAXIMUM	7.276E+03	-2.300E+02	1.489E+04	2.406E+04	-1.914E+06	3.575E+04	7.276E+03	-2.300E+02	1.489E+04	2.406E+04	-1.512E+06	3.000E+04
Y												
Y MAXIMUM	-3.523E+04	2.246E+04	-3.978E+03	6.708E+05	6.740E+05	3.544E+06	-3.523E+04	2.246E+04	-3.978E+03	6.708E+05	7.724E+05	2.938E+06
Z												
Z MAXIMUM	2.862E+04	6.578E+02	8.100E+03	-6.883E+04	-1.041E+06	-7.119E+04	2.862E+04	6.578E+02	8.100E+03	-6.883E+04	-8.225E+05	-5.376E+04
GRAND TOTAL	9.034E+04	2.521E+04	2.156E+04	1.022E+06	3.222E+06	3.889E+06	9.034E+04	2.521E+04	2.156E+04	1.022E+06	3.038E+06	3.217E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (52)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X												
X MAXIMUM	5.696E+03	3.568E+02	2.287E+04	1.410E+04	-1.471E+06	3.000E+04	5.696E+03	3.568E+02	2.287E+04	1.410E+04	-8.531E+05	2.037E+04
Y												
Y MAXIMUM	-2.842E+04	3.541E+04	-1.317E+03	-4.666E+05	6.273E+05	2.938E+06	-2.842E+04	3.541E+04	-1.317E+03	-4.666E+05	6.425E+05	1.982E+06
Z												
Z MAXIMUM	2.310E+04	-3.917E+02	1.244E+04	-4.033E+04	-7.999E+05	-5.376E+04	2.310E+04	-3.917E+02	1.244E+04	-4.033E+04	5.420E+05	-4.775E+04
GRAND TOTAL	7.311E+04	3.804E+04	2.952E+04	7.614E+05	2.744E+06	3.217E+06	7.311E+04	3.804E+04	2.952E+04	7.614E+05	2.271E+06	2.207E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (53)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	3	9	14	9	14	9	3	9	14	9	2	4
X MAXIMUM	-4.789E+03	-2.768E+02	1.910E+03	-2.969E-10	-6.875E+04	-9.966E+03	-4.789E+03	-2.768E+02	1.910E+03	-2.969E-10	2.013E-08	-1.013E-09
Y	8	4	9	9	9	4	8	4	9	9	9	4
Y MAXIMUM	1.849E+03	-7.873E+03	4.163E+03	-8.723E-09	-1.499E+05	-2.834E+05	1.849E+03	-7.873E+03	4.163E+03	-8.723E-09	7.645E-09	9.807E-08
Z	3	9	8	9	8	9	3	9	8	9	8	9
Z MAXIMUM	-2.605E+03	7.918E+02	-3.399E+03	8.936E-10	1.224E+05	2.851E+04	-2.605E+03	7.918E+02	-3.399E+03	8.936E-10	-7.577E-09	1.686E-09
GRAND TOTAL	8.624E+03	1.309E+04	1.129E+04	1.143E-08	4.065E+05	4.713E+05	8.624E+03	1.309E+04	1.129E+04	1.143E-08	2.876E-08	1.009E-07

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (54)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	3	3	9	3	3	7	3	3	9	3	3
X MAXIMUM	5.086E+03	4.096E+02	2.608E+04	1.410E+04	8.531E+05	2.037E+04	5.086E+03	4.096E+02	2.608E+04	1.410E+04	9.461E+05	-7.896E+03
Y	9	4	8	1	8	4	9	4	8	1	9	4
Y MAXIMUM	-2.479E+04	4.058E+04	-9.081E+02	-4.666E+05	6.425E+05	1.982E+06	-2.479E+04	4.058E+04	-9.081E+02	-4.666E+05	-5.974E+05	-8.182E+05
Z	8	8	3	9	8	8	8	8	3	9	3	9
Z MAXIMUM	2.020E+04	-4.826E+02	1.418E+04	-4.033E+04	5.420E+05	-4.775E+04	2.020E+04	-4.826E+02	1.416E+04	-4.033E+04	5.146E+05	1.760E+04
GRAND TOTAL	6.430E+04	4.395E+04	3.348E+04	7.614E+05	2.271E+06	2.207E+06	6.430E+04	4.395E+04	3.348E+04	7.614E+05	2.073E+06	9.246E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (55)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X	7	13	9	9	3	3	13	14	9	9	9	3
X MAXIMUM	4.563E+03	-1.303E+04	2.837E+03	1.410E+04	-7.896E+03	-9.461E+05	-1.176E+04	-9.924E+03	2.837E+03	3.553E+04	5.790E+04	-1.199E+06
Y	9	8	9	1	4	9	9	8	9	9	9	8
Y MAXIMUM	-2.053E+04	-1.558E+04	7.908E+04	-4.666E+05	8.182E+05	5.974E+05	-3.950E+03	-2.508E+04	7.908E+04	9.905E+05	1.614E+06	2.643E+04
Z	8	8	9	9	9	3	14	8	9	9	9	3
Z MAXIMUM	1.678E+04	-1.314E+04	-8.115E+03	-4.033E+04	1.760E+04	-5.146E+05	5.477E+03	-2.116E+04	-8.115E+03	-1.016E+05	-1.656E+05	-6.523E+05
GRAND TOTAL	5.418E+04	5.618E+04	9.523E+04	7.614E+05	9.246E+05	2.073E+06	2.643E+04	7.371E+04	9.523E+04	1.484E+06	2.026E+06	1.490E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (55)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	13	7	9	9	9	3
X MAXIMUM	-1.303E+04	-4.563E+03	2.837E+03	9.598E+04	8.803E+04	-1.245E+06
Y	8	9	9	9	9	8
Y MAXIMUM	-1.558E+04	2.053E+04	7.908E+04	2.675E+06	2.454E+06	6.972E+05
Z	8	8	9	9	9	3
Z MAXIMUM	-1.314E+04	-1.678E+04	-8.115E+03	-2.745E+05	-2.518E+05	-6.772E+05
GRAND TOTAL	5.618E+04	5.418E+04	9.523E+04	3.351E+06	2.968E+06	2.530E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (56)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	13	9	13	9	3	9	13	9	13	9	3	9
X MAXIMUM	-1.260E+04	-2.513E+03	4.097E+03	9.598E+04	1.245E+06	8.803E+04	-1.260E+04	-2.513E+03	4.097E+03	9.598E+04	1.142E+06	1.710E+05
Y	8	9	9	9	8	9	8	9	9	9	8	9
Y MAXIMUM	-1.423E+04	-7.005E+04	1.618E+04	2.675E+06	-6.972E+05	2.454E+06	-1.423E+04	-7.005E+04	1.618E+04	2.675E+06	-1.215E+06	4.766E+06
Z	8	9	8	9	3	9	8	9	8	9	8	9
Z MAXIMUM	-1.200E+04	7.188E+03	-1.322E+04	-2.745E+05	6.772E+05	-2.518E+05	-1.200E+04	7.188E+03	-1.322E+04	-2.745E+05	-1.024E+06	-4.890E+05
GRAND TOTAL	5.172E+04	8.447E+04	4.323E+04	3.351E+06	2.530E+06	2.968E+06	5.172E+04	8.447E+04	4.323E+04	3.351E+06	3.676E+06	5.729E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (57)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	13	9	13	9	3	9	13	9	13	9	3	9
X MAXIMUM	-1.223E+04	-2.094E+03	4.141E+03	9.598E+04	1.142E+06	1.710E+05	-1.223E+04	-2.094E+03	4.141E+03	9.598E+04	1.046E+06	2.275E+05
Y	8	9	9	9	8	9	8	9	9	9	9	9
Y MAXIMUM	-1.313E+04	-5.838E+04	1.214E+04	2.675E+06	-1.215E+06	4.766E+06	-1.313E+04	-5.838E+04	1.214E+04	2.675E+06	1.541E+06	6.342E+06
Z	8	9	8	9	8	9	8	9	8	9	8	9
Z MAXIMUM	-1.107E+04	5.991E+03	-9.896E+03	-2.745E+05	1.024E+06	-4.890E+05	-1.107E+04	5.991E+03	-9.896E+03	-2.745E+05	-1.292E+06	-6.508E+05
GRAND TOTAL	4.806E+04	7.053E+04	3.283E+04	3.351E+06	3.676E+06	5.729E+06	4.806E+04	7.053E+04	3.283E+04	3.351E+06	4.444E+06	7.624E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (58)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X												
X MAXIMUM	-1.051E+04	-4.980E+02	-4.840E+03	5.852E+04	1.003E+06	2.275E+05	-1.051E+04	-4.980E+02	-4.840E+03	5.852E+04	8.728E+05	2.409E+05
Y												
Y MAXIMUM	-1.028E+04	-1.388E+04	6.453E+02	1.631E+06	1.484E+06	6.342E+06	-1.028E+04	-1.388E+04	6.453E+02	1.631E+06	1.502E+06	6.717E+06
Z												
Z MAXIMUM	-8.671E+03	1.424E+03	-2.632E+03	-1.674E+05	-1.242E+06	-6.508E+05	-8.671E+03	1.424E+03	-2.632E+03	-1.674E+05	-1.253E+06	-6.892E+05
GRAND TOTAL	3.861E+04	1.718E+04	7.550E+03	2.187E+06	4.267E+06	7.624E+06	3.861E+04	1.718E+04	7.550E+03	2.187E+06	4.271E+06	8.077E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (59)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X												
X MAXIMUM	-1.788E+03	-1.041E+03	1.310E+03	3.441E-10	-4.716E+04	-3.746E+04	-1.788E+03	-1.041E+03	1.310E+03	3.441E-10	3.203E-09	-4.324E-10
Y												
Y MAXIMUM	6.896E+03	-2.901E+04	1.643E+03	1.017E-08	-5.914E+04	-1.044E+06	6.896E+03	-2.901E+04	1.643E+03	1.017E-08	7.035E-10	-2.040E-08
Z												
Z MAXIMUM	-5.682E+03	2.976E+03	1.386E+03	-9.550E-10	4.988E+04	1.072E+05	-5.682E+03	2.976E+03	1.386E+03	-9.550E-10	-1.926E-09	3.596E-09
GRAND TOTAL	1.840E+04	3.498E+04	5.515E+03	1.115E-08	1.986E+05	1.259E+06	1.840E+04	3.498E+04	5.515E+03	1.115E-08	6.033E-09	2.516E-08

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (60)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X												
X MAXIMUM	-1.008E+04	1.486E+02	-5.408E+03	5.852E+04	8.728E+05	2.409E+05	-1.008E+04	1.486E+02	-5.408E+03	5.852E+04	6.457E+05	2.347E+05
Y												
Y MAXIMUM	-9.035E+03	4.142E+03	4.124E+03	1.631E+06	1.502E+06	6.717E+06	-9.035E+03	4.142E+03	4.124E+03	1.631E+06	1.330E+06	6.543E+06
Z												
Z MAXIMUM	-7.621E+03	-4.250E+02	3.478E+03	-1.674E+05	-1.253E+06	-6.892E+05	-7.621E+03	-4.250E+02	3.478E+03	-1.674E+05	-1.107E+06	-6.714E+05
GRAND TOTAL	3.450E+04	6.198E+03	1.348E+04	2.187E+06	4.271E+06	8.077E+06	3.450E+04	6.198E+03	1.348E+04	2.187E+06	3.765E+06	7.876E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (61)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X												
X MAXIMUM	-9.629E+03	8.045E+02	-5.913E+03	5.852E+04	6.457E+05	2.347E+05	-9.629E+03	8.045E+02	-5.913E+03	5.852E+04	4.860E+05	2.130E+05
Y												
Y MAXIMUM	-7.780E+03	2.243E+04	-8.167E+03	1.631E+06	1.330E+06	6.543E+06	-7.780E+03	2.243E+04	-8.167E+03	1.631E+06	1.109E+06	5.937E+06
Z												
Z MAXIMUM	-6.562E+03	-2.301E+03	6.844E+03	-1.674E+05	-1.107E+06	-6.716E+05	-6.562E+03	-2.301E+03	6.844E+03	-1.674E+05	-9.224E+05	-6.092E+05
GRAND TOTAL	3.036E+04	2.704E+04	2.369E+04	2.187E+06	3.765E+06	7.876E+06	3.036E+04	2.704E+04	2.369E+04	2.187E+06	3.150E+06	7.154E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (62)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X												
X MAXIMUM	-8.496E+03	2.557E+03	-6.903E+03	1.624E+04	4.321E+05	2.130E+05	-8.496E+03	2.557E+03	-6.903E+03	1.624E+04	3.381E+05	1.440E+05
Y												
Y MAXIMUM	-3.083E+03	7.127E+04	-1.612E+04	-9.523E+05	9.854E+05	5.937E+06	-3.083E+03	7.127E+04	-1.612E+04	-9.523E+05	5.503E+05	4.013E+06
Z												
Z MAXIMUM	3.516E+03	-7.313E+03	1.340E+04	-4.646E+04	-8.168E+05	-6.092E+05	3.516E+03	-7.313E+03	1.340E+04	-4.646E+04	-4.549E+05	-4.118E+05
GRAND TOTAL	1.725E+04	8.574E+04	4.473E+04	1.174E+06	2.784E+06	7.154E+06	1.725E+04	8.574E+04	4.473E+04	1.174E+06	1.591E+06	4.842E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (63)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X												
X MAXIMUM	1.566E+03	-1.174E+03	1.681E+03	-3.606E-10	6.050E+04	-4.227E+04	1.566E+03	-1.174E+03	1.681E+03	-3.606E-10	1.402E-09	4.444E-09
Y												
Y MAXIMUM	4.771E+03	-3.273E+04	3.476E+03	-8.958E-09	-1.251E+05	-1.178E+06	4.771E+03	-3.273E+04	3.476E+03	-8.958E-09	-2.206E-09	1.195E-07
Z												
Z MAXIMUM	-3.937E+03	3.359E+03	2.932E+03	9.122E-10	-1.056E+05	1.209E+05	-3.937E+03	3.359E+03	2.932E+03	9.122E-10	-1.013E-09	-1.118E-08
GRAND TOTAL	1.322E+04	3.966E+04	1.053E+04	1.077E-08	3.791E+05	1.428E+06	1.322E+04	3.966E+04	1.053E+04	1.077E-08	4.493E-09	1.366E-07

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (64)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	13	9	3	9	13	9	13	9	3	9	13	9
X MAXIMUM	-8.150E+03	2.934E+03	-7.122E+03	1.624E+04	3.381E+05	1.440E+05	-8.150E+03	2.934E+03	-7.122E+03	1.624E+04	3.026E+05	8.234E+04
Y	8	9	9	4	9	9	8	9	9	4	9	9
Y MAXIMUM	-2.148E+03	8.180E+04	-1.786E+04	-9.523E+05	5.503E+05	4.013E+06	-2.148E+03	8.180E+04	-1.786E+04	-9.523E+05	1.752E+05	2.295E+06
Z	14	9	8	9	8	9	14	9	8	9	8	9
Z MAXIMUM	2.878E+03	-8.393E+03	1.484E+04	-4.646E+04	-4.549E+05	-4.118E+05	2.878E+03	-8.393E+03	1.484E+04	-4.646E+04	-1.432E+05	-2.355E+05
GRAND TOTAL	1.457E+04	9.843E+04	4.952E+04	1.174E+06	1.591E+06	4.842E+06	1.457E+04	9.843E+04	4.952E+04	1.174E+06	6.025E+05	2.779E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (65)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X	13	3	9	9	9	13	3	13	9	9	9	13
X MAXIMUM	-7.699E+03	7.308E+03	3.331E+03	1.624E+04	8.234E+04	3.026E+05	6.335E+03	7.239E+03	3.331E+03	-1.161E+04	1.509E+04	1.568E+05
Y	8	9	9	4	9	9	9	9	9	4	4	9
Y MAXIMUM	-9.527E+02	1.931E+04	9.286E+04	-9.523E+05	-2.295E+06	1.752E+05	1.419E+04	1.311E+04	9.286E+04	-8.159E+05	5.154E+05	-3.082E+05
Z	14	8	9	9	9	8	8	8	9	9	9	8
Z MAXIMUM	2.058E+03	-1.603E+04	-9.529E+03	-4.646E+04	2.355E+05	-1.432E+05	-1.191E+04	-1.077E+04	-9.529E+03	3.322E+04	-4.316E+04	2.564E+05
GRAND TOTAL	1.147E+04	5.355E+04	1.118E+05	1.174E+06	2.779E+06	6.025E+05	4.119E+04	3.615E+04	1.118E+05	9.852E+05	7.759E+05	8.817E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (65)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	3	13	9	9	9	2
X MAXIMUM	7.308E+03	7.699E+03	3.331E+03	3.758E+04	1.037E+05	1.329E+05
Y	9	8	9	9	9	9
Y MAXIMUM	1.931E+04	9.527E+02	9.286E+04	1.048E+06	2.890E+06	-4.923E+05
Z	8	14	9	9	9	8
Z MAXIMUM	-1.603E+04	-2.058E+03	-9.529E+03	-1.075E+05	-2.966E+05	4.051E+05
GRAND TOTAL	5.355E+04	1.147E+04	1.118E+05	1.276E+06	3.653E+06	1.317E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (66)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	3	9	13	9	2	9	3	9	13	9	13	9
X MAXIMUM	7.337E+03	-1.179E+02	-4.981E+03	3.758E+04	1.329E+05	-1.037E+05	7.337E+03	-1.179E+02	-4.981E+03	3.758E+04	-4.844E+05	-9.378E+04
Y	9	17	8	9	9	9	9	17	8	9	9	9
Y MAXIMUM	1.956E+04	-5.490E+03	-6.891E+02	1.048E+06	-4.923E+05	-2.890E+06	1.956E+04	-5.490E+03	-6.891E+02	1.048E+06	-4.394E+05	-2.614E+06
Z	8	9	14	9	8	9	8	9	14	9	6	9
Z MAXIMUM	-1.625E+04	3.371E+02	9.686E+02	-1.075E+05	4.051E+05	2.966E+05	-1.625E+04	3.371E+02	9.686E+02	-1.075E+05	3.562E+05	2.682E+05
GRAND TOTAL	5.428E+04	7.917E+03	6.787E+03	1.276E+06	1.317E+06	3.653E+06	5.428E+04	7.917E+03	6.787E+03	1.276E+06	1.239E+06	3.283E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (67)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	3	9	13	9	13	9	3	9	13	9	13	9
X MAXIMUM	7.350E+03	-3.390E+02	-1.120E+03	3.758E+04	-4.844E+05	-9.378E+04	7.350E+03	-3.390E+02	-1.120E+03	3.758E+04	-5.112E+05	-7.564E+04
Y	9	9	9	9	9	9	9	9	9	9	9	9
Y MAXIMUM	1.968E+04	-9.450E+03	1.607E+03	1.048E+06	-4.394E+05	-2.614E+06	1.968E+04	-9.450E+03	1.607E+03	1.048E+06	-4.008E+05	-2.387E+06
Z	8	9	8	9	8	9	8	9	8	9	8	9
Z MAXIMUM	-1.634E+04	9.696E+02	-1.322E+03	-1.075E+05	3.562E+05	2.682E+05	-1.634E+04	9.696E+02	-1.322E+03	-1.075E+05	3.245E+05	2.450E+05
GRAND TOTAL	5.461E+04	1.236E+04	4.612E+03	1.276E+06	1.239E+06	3.283E+06	5.461E+04	1.236E+04	4.612E+03	1.276E+06	1.166E+06	3.004E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (68)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	3	9	13	9	13	9	3	9	13	9	13	9
X MAXIMUM	7.357E+03	-4.952E+02	1.572E+03	3.758E+04	-5.112E+05	-8.564E+04	7.357E+03	-4.952E+02	1.572E+03	3.758E+04	-3.729E+05	-4.206E+04
Y	9	9	9	9	9	9	9	9	9	9	9	9
Y MAXIMUM	1.975E+04	-1.381E+04	2.304E+03	1.048E+06	-4.008E+05	-2.387E+06	1.975E+04	-1.381E+04	2.304E+03	1.048E+06	-1.981E+05	-1.173E+06
Z	8	9	8	9	8	9	8	9	8	9	8	9
Z MAXIMUM	-1.640E+04	1.417E+03	-1.856E+03	-1.075E+05	3.245E+05	2.450E+05	-1.640E+04	1.417E+03	-1.856E+03	-1.075E+05	1.612E+05	1.203E+05
GRAND TOTAL	5.481E+04	1.732E+04	6.106E+03	1.276E+06	1.166E+06	3.004E+06	5.481E+04	1.732E+04	6.106E+03	1.276E+06	6.702E+05	1.509E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (69)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	3	9	13	9	13	9	3	9	13	9	3	9
X MAXIMUM	7.367E+03	-7.404E+02	5.910E+03	3.758E+04	-3.729E+05	-4.206E+04	7.367E+03	-7.404E+02	5.910E+03	3.758E+04	-1.673E+05	2.309E+04
Y	9	9	9	9	9	9	9	9	9	9	9	9
Y MAXIMUM	1.984E+04	-2.064E+04	3.414E+03	1.048E+06	-1.981E+05	-1.173E+06	1.984E+04	-2.064E+04	3.414E+03	1.048E+06	1.024E+05	6.437E+05
Z	8	9	8	9	8	9	8	9	8	9	3	9
Z MAXIMUM	-1.648E+04	2.118E+03	-2.720E+03	-1.075E+05	1.612E+05	1.203E+05	-1.648E+04	2.118E+03	-2.720E+03	-1.075E+05	-9.101E+04	-6.605E+04
GRAND TOTAL	5.506E+04	2.617E+04	1.085E+04	1.276E+06	6.702E+05	1.509E+06	5.506E+04	2.617E+04	1.085E+04	1.276E+06	3.890E+05	8.067E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (70)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	3	9	13	9	3	9	3	9	13	9	13	9
X MAXIMUM	7.372E+03	-8.348E+02	7.654E+03	3.758E+04	-1.673E+05	2.309E+04	7.372E+03	-8.348E+02	7.654E+03	3.758E+04	8.208E+05	9.655E+04
Y	9	9	9	9	9	9	9	9	9	9	9	9
Y MAXIMUM	1.988E+04	-2.327E+04	3.844E+03	1.048E+06	1.024E+05	6.437E+05	1.988E+04	-2.327E+04	3.844E+03	1.048E+06	4.407E+05	2.692E+06
Z	8	9	8	9	3	9	8	9	8	9	8	9
Z MAXIMUM	-1.651E+04	2.388E+03	-3.057E+03	-1.075E+05	-9.101E+04	-6.605E+04	-1.651E+04	2.388E+03	-3.057E+03	-1.075E+05	-3.472E+05	-2.762E+05
GRAND TOTAL	5.519E+04	2.981E+04	1.295E+04	1.276E+06	3.890E+05	8.067E+05	5.519E+04	2.981E+04	1.295E+04	1.276E+06	1.468E+06	3.418E+06

SUMMARY OF SUPPORT FORCES/MOMENTS IN GLOBAL/LOCAL SYSTEMS

BDRY= BOUNDARY ELEMENTS (SPRING)
THAM= THERMAL ANCHOR MOTION
SRAM= SEISMIC ANCHOR MOTION
SNBR= SNUBBER ELEMENT

LOAD CASE 2 USM RESPONSE SPECTRA ANALYSIS

KIND OF SUPPORT	NODE NUMBER	GLOBAL COMPONENTS FX	FY	FZ	MX	MY	MZ	LOCAL COMPONENTS FL	ML
BDRY	1	7160.	0.	0.	0.	0.	0.	7160.	0.
BDRY	1	0.	15279.	0.	0.	0.	0.	15279.	0.
BDRY	1	0.	0.	17264.	0.	0.	0.	17264.	0.
BDRY	1	0.	0.	0.	1158586.	0.	0.	0.	1158586.
BDRY	1	0.	0.	0.	0.	211988.	0.	0.	211988.
BDRY	1	0.	0.	0.	0.	0.	158531.	0.	158531.
BDRY	10	16579.	0.	0.	0.	0.	0.	16579.	0.
BDRY	10	0.	29397.	0.	0.	0.	0.	29397.	0.
BDRY	14	15479.	0.	0.	0.	0.	0.	15479.	0.
BDRY	14	0.	31922.	0.	0.	0.	0.	31922.	0.
BDRY	14	0.	0.	23303.	0.	0.	0.	23303.	0.
BDRY	14	0.	0.	0.	1723207.	0.	0.	0.	1723207.
BDRY	14	0.	0.	0.	0.	418360.	0.	0.	418360.
BDRY	14	0.	0.	0.	0.	0.	457714.	0.	457714.
BDRY	25	133770.	0.	0.	0.	0.	0.	133770.	0.
BDRY	26	0.	125991.	0.	0.	0.	0.	125991.	0.
BDRY	26	0.	0.	31090.	0.	0.	0.	31090.	0.
BDRY	34	0.	103538.	0.	0.	0.	0.	103538.	0.
BDRY	34	0.	0.	44262.	0.	0.	0.	44262.	0.
BDRY	40	132.	0.	0.	0.	0.	0.	132.	0.
BDRY	40	0.	131.	0.	0.	0.	0.	131.	0.
BDRY	40	0.	0.	86.	0.	0.	0.	86.	0.
BDRY	44	0.	71620.	0.	0.	0.	0.	71620.	0.
BDRY	44	0.	0.	161923.	0.	0.	0.	161923.	0.
BDRY	55	56274.	0.	0.	0.	0.	0.	56274.	0.
BDRY	55	0.	101617.	0.	0.	0.	0.	101617.	0.
BDRY	66	0.	115980.	0.	0.	0.	0.	115980.	0.
BDRY	71	12953.	0.	0.	0.	0.	0.	12953.	0.
BDRY	71	0.	29814.	0.	0.	0.	0.	29814.	0.
BDRY	71	0.	0.	55193.	0.	0.	0.	55193.	0.
BDRY	71	0.	0.	0.	3417787.	0.	0.	0.	3417787.
BDRY	71	0.	0.	0.	0.	1467637.	0.	0.	1467637.
BDRY	71	0.	0.	0.	0.	0.	1275568.	0.	1275568.

RESPONSE SPECTRUM TIME LOG
TOTAL FOR SPECTRUM ANALYSIS = .00

BENCHMARK PROBLEM 1

HIGHER FREQUENCY RESPONSE

(RIGID RESPONSE)

S T A T I C A N A L Y S I S

LOAD CASE 1

DISPLACEMENTS/ROTATIONS OF UNRESTRAINED NODES

NODE NUMBER	X-TRANSLATION	Y-TRANSLATION	Z-TRANSLATION	X-ROTATION	Y-ROTATION	Z-ROTATION
1	-2.47096E-10	2.32689E-11	-5.33979E-11	3.32061E-11	2.31926E-11	-4.41657E-11
2	-1.58120E-03	-2.46337E-06	-1.04114E-03	3.18818E-05	2.14036E-05	-4.07562E-05
3	-3.72062E-03	-2.40149E-04	-3.11718E-03	3.28838E-05	-7.24143E-06	-2.52635E-05
4	-3.72374E-03	-5.24342E-05	-2.66333E-03	5.76616E-06	-5.45453E-05	6.54629E-06
5	-3.68356E-03	1.25424E-04	-8.88903E-04	5.47533E-06	-5.71401E-05	4.70154E-06
6	-3.62752E-03	2.33732E-04	8.25719E-04	5.18450E-06	-4.89204E-05	2.13036E-06
7	-3.60543E-03	2.65781E-04	1.69517E-03	5.11063E-06	-4.43769E-05	1.39552E-06
8	-3.57557E-03	2.83450E-04	2.46271E-03	5.03676E-06	-3.81186E-05	6.83335E-07
9	-3.36526E-03	2.21088E-04	3.17574E-03	4.57085E-06	1.45265E-05	-2.36056E-06
10	-1.29436E-09	1.71676E-11	3.80075E-04	3.12599E-07	1.00342E-05	-2.85216E-06
11	-3.21285E-03	8.97850E-05	3.43004E-04	-1.96810E-06	-5.04006E-05	-1.77689E-06
12	-4.80175E-03	2.06677E-04	2.67191E-04	-5.52234E-08	2.57248E-05	-7.01603E-07
13	-4.05535E-03	2.02065E-04	2.42886E-04	9.34719E-07	4.79017E-05	-4.91620E-07
14	-2.29144E-10	-2.15685E-12	-3.50164E-11	1.53956E-11	-3.14774E-11	-3.16942E-11
15	-1.86992E-03	-9.85296E-04	-2.83540E-04	3.39768E-05	-3.48233E-05	-4.11604E-05
16	-3.78707E-03	-9.84767E-04	-2.32969E-03	3.14144E-05	-3.84391E-05	-1.99493E-05
17	-3.60831E-03	-6.37724E-04	-1.66479E-03	1.51209E-05	-4.45893E-05	1.08802E-05
18	-3.56630E-03	-3.34692E-04	-3.23194E-04	1.24699E-05	-4.03338E-05	8.80910E-06
19	-3.50901E-03	-1.05317E-04	7.97203E-04	9.85901E-06	-2.85946E-05	6.05048E-06
20	-3.48678E-03	-2.98693E-06	1.29064E-03	9.19072E-06	-2.38874E-05	5.25042E-06
21	-3.45703E-03	8.36374E-05	1.68500E-03	8.52244E-06	-1.79690E-05	4.45301E-06
22	-3.18564E-03	1.89893E-04	1.09973E-03	3.16796E-06	4.17389E-05	1.34360E-07
23	-3.09871E-03	1.82579E-04	2.22975E-04	1.67675E-06	6.02372E-05	-3.64717E-07
24	-1.57015E-03	1.51047E-04	1.98870E-04	1.89424E-06	7.08437E-05	-4.42885E-07
25	-2.10960E-09	1.16025E-04	1.72449E-04	2.05279E-06	6.12722E-05	-5.21328E-07
26	-1.29964E-04	4.69145E-12	4.01224E-10	2.47095E-06	9.93045E-06	-3.44205E-07
27	-2.99931E-04	-9.26918E-06	-4.13226E-04	2.30981E-06	5.29670E-06	-7.15253E-08
28	-4.47621E-04	-7.49795E-06	-5.16644E-04	2.15524E-06	-7.76612E-07	9.39963E-08
29	-5.81103E-04	-5.85815E-07	-3.42581E-04	2.00068E-06	-5.03252E-06	1.42114E-07
30	-7.01171E-04	5.72354E-06	-4.86543E-05	1.84611E-06	-5.38173E-06	8.44780E-08
31	-8.08599E-04	7.28353E-06	1.58195E-04	1.69154E-06	-1.79449E-06	-2.83471E-08
32	-8.34577E-04	6.05068E-06	1.91241E-04	1.65385E-06	-3.90019E-07	-5.53058E-08
33	-8.57228E-04	4.10489E-06	1.81043E-04	1.61615E-06	1.10935E-06	-7.20611E-08
34	-9.25751E-04	1.25133E-12	-3.17900E-11	1.46816E-06	6.22228E-06	-4.90959E-08
35	-1.03871E-03	1.32107E-06	-7.23932E-04	1.15245E-06	2.63506E-06	2.68233E-08
36	-1.11193E-03	4.19540E-07	-2.00648E-04	8.36744E-07	-1.31807E-05	-8.67440E-08
37	-1.13569E-03	-6.25220E-06	6.19783E-04	6.77429E-07	-1.97275E-05	-2.02523E-07
38	-1.14447E-03	5.83688E-06	-4.83990E-04	6.77429E-07	-2.26936E-05	-2.51705E-07
39	-1.14786E-03	1.81560E-05	-1.57334E-03	6.77429E-07	-2.35133E-05	-2.65060E-07
40	-1.14801E-03	2.13552E-05	-1.85663E-03	6.77429E-07	-2.35231E-05	-2.65219E-07
41	-1.13038E-03	-1.46040E-05	1.47027E-03	4.81570E-07	-5.73910E-06	-4.84478E-08
42	-1.11330E-03	-1.19012E-05	1.27685E-03	2.84251E-07	1.08927E-05	1.14596E-07
43	-1.09175E-03	-4.03521E-06	4.78643E-04	1.26396E-07	1.81184E-05	1.57773E-07
44	-1.07849E-03	-2.06798E-12	-8.85421E-11	4.74681E-08	1.80236E-05	1.31822E-07
45	-5.47933E-04	-5.06722E-06	-1.36607E-04	-1.57851E-07	-3.00881E-05	-3.99730E-08
46	1.34244E-03	-1.35759E-05	-1.77698E-04	-3.20984E-09	-7.12835E-06	4.55846E-08
47	1.47274E-03	-1.32636E-05	-1.81859E-04	3.11393E-08	-6.92082E-07	5.50213E-08
48	1.39154E-03	-1.18895E-05	-1.84474E-04	6.52298E-08	5.75510E-06	6.83099E-08
49	1.47524E-03	-1.13340E-05	-1.63063E-04	3.11393E-08	-5.23924E-07	5.36178E-08
50	-2.17321E-04	-1.03243E-06	-1.92819E-04	1.70979E-07	2.74126E-05	1.59440E-07
51	-1.88031E-03	9.15338E-06	-1.91914E-04	3.96340E-08	4.30479E-06	2.50570E-07
52	-1.91210E-03	9.79985E-06	-1.90456E-04	-1.90381E-09	3.23342E-06	2.63858E-07
53	-1.65801E-03	9.02862E-06	-1.83914E-04	-4.22825E-08	-1.17314E-05	2.50728E-07
54	-1.91671E-03	1.96490E-05	-1.09053E-04	-1.90381E-09	-2.27161E-06	2.73684E-07

55	-1.68205E-09	1.19256E-12	-1.40685E-04	-1.39225E-07	-4.90355E-06	1.64432E-07
56	-9.39803E-04	-4.49068E-07	-5.86761E-04	-1.09555E-07	-9.00598E-06	5.73375E-08
57	-1.02099E-03	8.97634E-07	-6.11315E-05	-8.93837E-08	-1.49510E-05	2.29929E-08
58	-1.04838E-03	1.36850E-06	3.64153E-04	-8.29661E-08	-1.42019E-05	1.17300E-08
59	-1.06703E-03	1.50769E-06	6.88883E-04	-7.24367E-08	-1.00375E-05	1.70025E-09
60	-1.60299E-03	4.40980E-06	3.66428E-04	-8.44643E-08	-1.53931E-05	1.17300E-08
61	-1.11752E-03	8.34346E-07	7.63331E-04	-3.03154E-08	3.36005E-06	-2.43862E-08
62	-1.12898E-03	9.28732E-08	6.23873E-04	-1.97860E-08	5.25866E-06	-2.73848E-08
63	-1.13338E-03	-6.82649E-07	4.23838E-04	-1.04382E-08	7.26651E-06	-2.83664E-08
64	-9.70264E-04	7.89503E-07	6.24394E-04	-1.93555E-08	4.41780E-06	-2.73848E-08
65	-1.13642E-03	-1.29874E-06	2.15144E-04	8.25921E-09	7.93245E-06	-2.82951E-08
66	-9.22713E-04	4.70537E-13	1.20455E-04	9.30933E-08	-1.72513E-05	-3.58793E-09
67	7.38456E-04	8.49037E-06	8.89269E-05	6.68346E-08	-1.21487E-05	-2.38521E-09
68	9.74027E-04	9.87010E-06	8.08474E-05	4.16863E-08	-6.57843E-06	-2.12998E-09
69	9.04089E-04	1.01851E-05	5.43068E-05	-3.47671E-06	6.12751E-06	-1.41999E-09
70	1.49026E-04	4.56199E-06	2.72762E-05	-6.92643E-08	5.72033E-06	-7.09994E-10
71	-1.66364E-10	5.84922E-13	1.34558E-10	-5.47803E-13	6.53771E-12	-2.29011E-15

STATIC ANALYSIS

LOAD CASE 2

DISPLACEMENTS/ROTATIONS OF UNRESTRAINED NODES

NODE NUMBER	X-TRANSLATION	Y-TRANSLATION	Z-TRANSLATION	X-ROTATION	Y-ROTATION	Z-ROTATION
1	1.76142E-11	-3.47172E-10	-3.68253E-11	-3.46953E-11	4.38227E-12	-3.67465E-11
2	-5.94525E-04	-9.08899E-04	3.87511E-04	-1.39951E-06	4.52176E-06	-1.62395E-06
3	-3.20387E-04	-9.65187E-04	1.90267E-04	5.04509E-06	4.84280E-06	7.95163E-06
4	1.21708E-05	-6.69293E-04	-1.25673E-04	5.09696E-06	2.55833E-06	1.00081E-05
5	1.90280E-05	-3.52450E-04	-1.87991E-04	4.49058E-06	1.22652E-06	9.40077E-06
6	2.49407E-05	-8.91203E-05	-2.01346E-04	3.88419E-06	-4.76623E-07	5.91763E-06
7	2.62707E-05	7.99811E-06	-1.88450E-04	3.73016E-06	-9.26980E-07	4.51986E-06
8	2.71598E-05	7.32361E-05	-1.66969E-04	3.57613E-06	-1.33361E-06	3.13770E-06
9	2.98015E-05	6.16031E-05	-5.31000E-05	2.60470E-06	-2.64341E-06	-1.37596E-07
10	3.59226E-12	-2.02029E-10	1.47214E-05	5.91496E-06	9.92464E-07	-1.23264E-06
11	1.01699E-04	-4.06048E-04	1.76434E-05	1.25033E-06	9.34494E-07	-4.71270E-06
12	1.00932E-04	-1.76310E-04	1.92865E-05	-3.40462E-06	-9.48440E-07	-8.19276E-06
13	7.49919E-05	-1.13634E-04	1.94883E-05	-2.59335E-06	-1.15948E-06	-8.87234E-06
14	1.48068E-11	-3.53893E-10	4.05060E-11	3.44694E-11	-4.74813E-12	-3.84302E-11
15	-6.22582E-04	-9.24564E-04	-3.67507E-04	3.33069E-07	-4.48809E-06	-1.88476E-06
16	-3.48546E-04	-9.81754E-04	-1.01620E-04	-5.91147E-06	-3.75240E-06	8.28116E-06
17	3.34901E-05	-5.95858E-04	1.53526E-04	-4.71108E-06	-4.75548E-07	1.46829E-05
18	3.97442E-05	-1.26222E-04	1.53012E-04	-4.19353E-06	4.91734E-07	1.39187E-05
19	4.51864E-05	2.66170E-04	1.22922E-04	-3.67598E-06	1.26271E-06	8.35695E-06
20	4.64326E-05	4.04595E-04	9.78665E-05	-3.54451E-06	1.36930E-06	5.91393E-06
21	4.73005E-05	4.86976E-04	7.14996E-05	-3.41305E-06	1.38337E-06	3.12707E-06
22	5.06002E-05	1.14671E-04	1.19980E-05	-2.35972E-06	-1.82071E-07	-9.50796E-06
23	5.10172E-05	-7.46537E-05	1.95649E-05	-2.06637E-06	-1.07788E-06	-9.28305E-06
24	2.63146E-05	-6.09485E-05	1.91710E-05	-1.91881E-06	-1.25366E-06	-8.93239E-06
25	1.24446E-11	-3.77243E-05	1.87157E-05	-2.60923E-06	-1.18496E-06	-8.58049E-06
26	-3.95678E-06	-2.80323E-10	7.00081E-12	-1.02024E-05	5.64518E-07	-6.68330E-06
27	-4.06594E-06	-3.41449E-04	-2.17417E-05	-1.17179E-05	2.59497E-07	-2.84589E-06
28	-4.08828E-06	-2.81137E-04	-2.55019E-05	-1.31716E-05	-7.43880E-08	2.99312E-06
29	-4.03859E-06	-6.75972E-05	-1.49171E-05	-1.46253E-05	-2.78859E-07	3.06931E-06
30	-3.92560E-06	1.23444E-06	4.24539E-07	-1.60789E-05	-2.62610E-07	-1.81815E-07
31	-3.75804E-06	-8.09883E-05	9.51959E-06	-1.75326E-05	-5.46584E-08	-5.60860E-07
32	-3.69952E-06	-9.22050E-05	1.00896E-05	-1.78871E-05	1.52263E-08	2.93398E-07
33	-3.62849E-06	-6.13146E-05	8.58564E-06	-1.82416E-05	7.91772E-08	9.44230E-07
34	-3.33927E-06	-5.83533E-10	2.88606E-13	-1.96335E-05	2.17768E-07	-8.57938E-06
35	-2.61783E-06	-1.64865E-03	-1.90234E-05	-2.26027E-05	3.61068E-08	-2.49437E-06
36	-1.81931E-06	-1.54360E-04	-3.49966E-06	-2.55719E-05	-2.83062E-07	1.65912E-05
37	-1.40946E-06	4.30906E-04	1.20531E-05	-2.70702E-05	-3.12179E-07	1.97319E-07
38	-1.40627E-06	5.61231E-04	-4.81499E-06	-2.70702E-05	-3.45505E-07	-2.98381E-06
39	-1.40497E-06	7.36091E-04	-2.12654E-05	-2.70702E-05	-3.55577E-07	-3.65738E-06
40	-1.40490E-06	7.80804E-04	-2.55469E-05	-2.70702E-05	-3.55702E-07	-3.66451E-06
41	-9.16690E-07	1.53215E-04	2.41009E-05	-2.89122E-05	-5.56518E-08	-6.53124E-06
42	-4.33456E-07	-2.58370E-04	1.86884E-05	-3.07680E-05	1.90922E-07	-2.56549E-06
43	-6.24091E-08	-1.83206E-04	6.19015E-06	-3.22526E-05	2.45596E-07	4.21845E-06
44	1.16588E-07	-4.13755E-10	1.32492E-12	-3.29949E-05	2.01437E-07	4.27864E-06
45	7.31937E-06	-8.41407E-04	2.08137E-06	-5.01324E-06	-2.15057E-07	1.84776E-05
46	1.72875E-05	-6.18239E-04	2.05020E-06	7.03254E-06	4.43126E-08	3.64229E-05
47	1.54775E-05	-4.09205E-04	2.04348E-06	6.93468E-06	9.70986E-08	3.84022E-05
48	1.20145E-05	-2.29564E-04	2.03944E-06	6.08710E-06	1.44146E-07	3.83019E-05
49	1.54978E-05	1.00085E-03	-1.49405E-06	6.93468E-06	9.82524E-08	3.91600E-05
50	-5.56715E-06	-3.62796E-05	1.99747E-06	-9.67022E-07	2.34818E-07	3.76136E-05
51	-1.68563E-05	-2.76460E-04	1.93213E-06	-1.90140E-06	-2.04885E-09	3.69253E-05
52	-1.60977E-05	-3.19304E-04	1.91779E-06	-9.47774E-07	-5.88309E-08	3.68249E-05
53	-1.36247E-05	-3.37443E-04	1.89355E-06	5.23330E-07	-1.06221E-07	3.44941E-05
54	-1.61182E-05	1.03597E-03	4.10118E-06	-9.47774E-07	-6.06305E-08	3.76376E-05

55	-1.74665E-12	-4.24065E-10	1.74397E-06	4.02595E-06	-1.68225E-07	1.91758E-05
56	1.67427E-06	2.56820E-04	5.32459E-07	-4.04192E-06	9.38769E-08	2.15930E-06
57	1.66887E-06	2.89682E-04	-3.07090E-06	-3.55195E-06	9.23067E-08	-1.51512E-06
58	1.66523E-06	2.34512E-04	-5.55682E-06	-3.39606E-06	8.01773E-08	-3.25021E-06
59	1.65211E-06	1.14594E-04	-7.47214E-06	-1.91736E-06	5.77893E-08	-5.00764E-06
60	4.61679E-06	3.74309E-04	-5.56377E-06	-3.87804E-06	8.19683E-08	-3.25021E-06
61	1.60195E-06	-2.25873E-04	-7.88094E-06	3.99795E-06	-3.75422E-08	-7.57330E-06
62	1.58533E-06	-4.40369E-04	-6.51161E-06	5.47665E-06	-5.92641E-08	-6.67695E-06
63	1.56867E-06	-6.05196E-04	-4.55025E-06	6.21274E-06	-7.27627E-08	-4.78988E-06
64	-5.61654E-07	-6.47374E-04	-6.51935E-06	5.74723E-06	-5.96344E-08	-6.67695E-06
65	1.53859E-06	-6.56891E-04	-2.62482E-06	7.68507E-06	-7.89673E-08	-5.15031E-07
66	9.36015E-07	-5.05379E-10	-1.01076E-06	3.47165E-06	8.73351E-08	8.21726E-06
67	-7.99491E-06	-1.58649E-04	-7.45893E-07	-3.53402E-06	7.64548E-08	5.46274E-06
68	-9.62639E-06	-2.45533E-04	-6.78075E-07	-3.38011E-06	5.12244E-08	4.87819E-06
69	-1.06146E-05	-4.90505E-04	-4.55429E-07	-1.60288E-06	-3.13484E-08	3.25213E-06
70	-4.90243E-06	-4.57626E-04	-2.28729E-07	3.79687E-06	-7.28725E-08	1.62607E-06
71	-6.55098E-13	-2.43653E-10	-1.12836E-12	6.53025E-11	-5.93810E-13	5.24494E-12

S T A T I C A N A L Y S I S

LOAD CASE 3

DISPLACEMENTS/ROTATIONS OF UNRESTRAINED NODES

NODE NUMBER	X-TRANSLATION	Y-TRANSLATION	Z-TRANSLATION	X-ROTATION	Y-ROTATION	Z-ROTATION
1	-3.61440E-12	-4.48277E-11	-1.29398E-10	-6.51050E-12	1.80672E-11	-5.21554E-12
2	-4.38308E-04	-1.88446E-04	-9.38703E-05	-1.82082E-05	1.53241E-05	-2.68721E-06
3	-4.77520E-04	-1.98579E-04	1.32623E-03	-2.54491E-05	1.79908E-05	9.49772E-07
4	-3.89196E-04	-1.34372E-04	1.34308E-03	-1.75967E-05	3.00826E-05	1.20947E-06
5	-3.81640E-04	-1.01895E-04	3.86307E-04	-1.49822E-05	3.18146E-05	1.11640E-06
6	-3.71803E-04	-6.75149E-05	-5.87103E-04	-1.23676E-05	2.97473E-05	1.04583E-06
7	-3.60121E-04	-4.85670E-05	-1.12081E-03	-1.17034E-05	2.82352E-05	9.82175E-07
8	-3.63322E-04	-3.13395E-05	-1.61633E-03	-1.10393E-05	2.61681E-05	8.82986E-07
9	-3.30249E-04	-5.47011E-06	-2.55253E-03	-6.85076E-06	1.51134E-05	2.59321E-07
10	-1.61584E-10	-1.07349E-11	-2.81825E-03	2.68670E-06	1.23946E-06	-4.26349E-06
11	-3.21162E-04	-2.69550E-04	-2.70267E-03	2.79845E-06	-5.11618E-06	-4.68739E-06
12	-4.83162E-04	-3.07631E-04	-2.50781E-03	-2.23538E-06	2.64384E-06	-5.11130E-06
13	-4.03177E-04	-2.48942E-04	-2.44857E-03	-3.30867E-06	4.76875E-06	-5.19408E-06
14	-2.01243E-11	6.41271E-11	-1.21174E-10	-1.20662E-11	1.46311E-11	6.36500E-13
15	1.93282E-04	1.65382E-04	2.35430E-05	-1.91040E-05	1.19355E-05	-6.02227E-06
16	-2.74518E-04	1.82131E-04	1.46609E-03	-2.49736E-05	1.80995E-05	-7.02585E-06
17	-3.32011E-04	2.35203E-04	1.31836E-03	-1.43348E-05	3.35242E-05	3.10554E-06
18	-3.32081E-04	3.28364E-04	2.53020E-04	-1.22745E-05	3.41496E-05	1.67303E-06
19	-3.30759E-04	3.44735E-04	-7.63721E-04	-1.02143E-05	2.88716E-05	-1.38107E-06
20	-3.29842E-04	3.11802E-04	-1.27421E-03	-9.69093E-06	2.61812E-05	-2.31510E-06
21	-3.28237E-04	2.59990E-04	-1.72109E-03	-9.16759E-06	2.28450E-05	-3.18815E-06
22	-3.11401E-04	8.27189E-05	-2.38901E-03	-4.97451E-06	5.12879E-06	-5.82372E-06
23	-3.05673E-04	-1.84674E-04	-2.40094E-03	-3.80575E-06	5.75199E-06	-5.24411E-06
24	-1.60450E-04	-1.20478E-04	-2.33718E-03	-3.78563E-06	7.35190E-06	-4.76167E-06
25	5.87777E-10	-5.58515E-05	-2.26858E-03	-3.76782E-06	7.32956E-06	-4.27754E-06
26	-7.98191E-04	3.64008E-13	-1.41703E-09	-4.62716E-06	-3.35161E-05	-9.12721E-07
27	-6.58551E-04	-2.22709E-05	6.05994E-04	-4.36106E-06	-2.70792E-06	-1.07796E-07
28	-5.27248E-04	-1.22261E-05	3.34385E-04	-4.10583E-06	9.54147E-06	3.69736E-07
29	-3.98646E-04	1.20103E-05	-2.80061E-04	-3.85059E-06	1.34318E-05	4.77686E-07
30	-2.72861E-04	3.22383E-05	-9.18227E-04	-3.59535E-06	9.63318E-06	2.47824E-07
31	-1.49998E-04	3.50666E-05	-1.17404E-03	-3.34011E-06	-3.06355E-06	-1.66487E-07
32	-1.17342E-04	2.89065E-05	-1.03712E-03	-3.27787E-06	-7.41407E-06	-2.68835E-07
33	-8.55534E-05	1.99953E-05	-7.61818E-04	-3.21562E-06	-1.11347E-05	-3.41751E-07
34	2.31282E-05	2.61894E-12	-5.24822E-10	-2.97124E-06	-9.45671E-06	-3.61355E-07
35	2.45340E-04	-1.66139E-05	-4.55536E-05	-2.44991E-06	-6.76042E-07	3.61458E-08
36	4.53864E-04	1.06361E-06	6.02311E-06	-1.92857E-06	1.30626E-05	1.98261E-07
37	5.53738E-04	9.09878E-06	-1.14871E-03	-1.66549E-06	3.92006E-05	7.53435E-08
38	5.57631E-04	6.13291E-06	1.19576E-03	-1.66549E-06	4.86330E-05	5.73914E-08
39	5.59139E-04	3.69718E-06	1.56873E-03	-1.66549E-06	5.10798E-05	5.37356E-08
40	5.59205E-04	3.05675E-06	1.81500E-03	-1.66549E-06	5.11084E-05	5.36976E-08
41	6.61279E-04	1.00772E-05	-2.93668E-03	-1.34207E-06	1.26438E-05	-3.66494E-08
42	7.64075E-04	5.18574E-06	-2.56955E-03	-1.01623E-06	-2.29479E-05	-9.03141E-08
43	8.42319E-04	8.82585E-07	-8.69795E-04	-7.55562E-07	-3.22902E-05	-4.87485E-08
44	8.80119E-04	1.52562E-12	-1.19749E-09	-6.25227E-07	-2.15132E-05	5.05996E-09
45	1.08161E-03	1.22502E-06	-4.44796E-04	-8.50278E-09	-2.23755E-05	4.97150E-07
46	2.35819E-03	3.44121E-06	-6.29540E-04	-1.05992E-08	5.37714E-06	5.38072E-07
47	2.13477E-03	3.03786E-06	-6.50566E-04	-3.03229E-08	1.26133E-05	5.62586E-07
48	1.70431E-03	1.82254E-06	-6.65650E-04	-5.10371E-08	1.76997E-05	5.21862E-07
49	2.13747E-03	2.29056E-05	-1.14075E-03	-3.03229E-08	1.36054E-05	5.51781E-07
50	-3.58431E-04	-4.83287E-06	-7.39438E-04	-8.59900E-08	2.78284E-05	3.79740E-07
51	-1.78047E-03	-8.54391E-06	-7.97833E-04	1.26507E-08	3.33447E-06	2.37619E-07
52	-1.79863E-03	-7.90978E-06	-8.06079E-04	3.46310E-08	-2.57395E-06	2.16895E-07
53	-1.62469E-03	-6.63041E-06	-8.11611E-04	5.43189E-08	-8.77020E-06	1.98817E-07
54	-1.80054E-03	-1.36658E-07	-7.25232E-04	3.46310E-08	-2.24926E-06	2.15930E-07

55	3.74866E-11	-1.07349E-12	-8.32367E-04	9.24473E-08	-2.77636E-05	8.00115E-08
56	8.75468E-04	1.90914E-06	-3.21688E-04	3.90318E-08	5.70861E-08	-4.67876E-08
57	8.91245E-04	-6.79558E-08	-4.54890E-04	4.67385E-08	6.37975E-06	-5.45016E-08
58	8.96311E-04	-1.57863E-06	-6.55561E-04	4.91904E-08	7.73492E-06	-4.99571E-08
59	8.98726E-04	-2.85276E-06	-8.75084E-04	4.75306E-08	7.56063E-06	-4.08136E-08
60	1.18883E-03	-3.40400E-06	-6.55367E-04	5.06886E-08	8.12131E-06	-4.99571E-08
61	9.03462E-04	-3.67924E-06	-1.14743E-03	4.08905E-08	2.75283E-06	6.96053E-09
62	9.03867E-04	-3.31326E-06	-1.20100E-03	3.92307E-08	7.18216E-07	2.02365E-08
63	8.99548E-04	-2.54911E-06	-1.15085E-03	3.27974E-08	-2.59255E-06	3.15401E-08
64	9.61354E-04	-4.78886E-06	-1.20310E-03	4.09700E-08	1.58744E-06	2.02365E-08
65	8.91035E-04	-1.60450E-06	-9.97684E-04	1.99297E-08	-5.75998E-06	4.64341E-08
66	5.22234E-04	-9.61721E-13	-9.01591E-04	-7.36874E-08	2.37027E-05	4.43994E-08
67	-1.66157E-03	-8.22759E-06	-7.51151E-04	-7.19449E-08	1.73948E-05	2.95162E-08
68	-2.02046E-03	-9.76958E-06	-7.01854E-04	-4.79678E-08	1.10840E-05	2.63578E-08
69	-2.17875E-03	-1.05973E-05	-5.17041E-04	3.21592E-08	-7.06808E-06	1.75719E-08
70	-9.76541E-04	-4.87596E-06	-2.83176E-04	7.26327E-08	-1.48686E-05	8.78595E-09
71	-1.24497E-10	-6.48949E-13	-1.51921E-09	5.90099E-13	-1.17125E-10	2.83394E-14

PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
1	BEND	1	END-I	-930.959	-232.689	1686.120	54710.15	-23192.59	7749.64
			CENTER	-822.791	493.806	1686.120	37100.59	-19316.67	4504.59
			END-J	-232.566	930.990	1686.120	27390.45	-4123.50	-13202.15
1	BEND	2	END-I	384.945	2828.229	135.843	1450.45	-4382.27	50516.96
			CENTER	2272.171	1727.513	135.843	-879.57	-1242.37	-6099.82
			END-J	2828.178	-385.318	135.843	-306.65	2625.41	-22780.03
1	BEND	3	END-I	466.127	448.277	517.243	-915.67	-18067.24	8291.57
			CENTER	646.581	-12.665	517.243	-8878.12	-1154.01	2877.97
			END-J	448.215	-466.186	517.243	-2547.79	16435.34	8828.92
2	TANGENT	1	END-I	-170.529	-371.409	433.304	27390.99	6422.13	-12248.53
			END-J	-170.529	-371.409	433.304	27390.99	32095.39	9757.46
2	TANGENT	2	END-I	1551.099	-210.643	-204.592	-306.99	17964.33	-14251.49
			END-J	1551.099	-210.643	-204.592	-306.99	5842.25	-1770.90
2	TANGENT	3	END-I	279.227	299.182	-28.936	-2549.96	5378.31	17864.29
			END-J	279.227	299.182	-28.936	-2549.96	3663.85	137.74
3	BEND	1	END-I	-108.279	1076.236	306.941	27390.99	-9757.46	32095.39
			CENTER	684.449	837.578	306.941	15165.82	-19756.73	8313.55
			END-J	1076.236	108.279	306.941	-549.24	-18182.77	-3440.05
3	BEND	2	END-I	299.359	441.702	-97.203	-306.99	1770.90	5842.25
			CENTER	524.009	100.652	-97.203	181.04	-592.69	-897.26
			END-J	441.702	-299.359	-97.203	-1145.18	-2609.09	1571.95
3	BEND	3	END-I	112.047	251.366	169.182	-2549.96	-137.74	3663.85
			CENTER	256.972	98.513	169.182	-413.92	5294.59	-683.89
			END-J	251.366	-112.047	169.182	4937.73	7625.43	-515.72
4	TANGENT	1	END-I	2186.716	72.599	787.481	-549.24	-18182.77	-3440.05
			END-J	2186.716	72.599	787.481	-549.24	5441.66	-5618.02
4	TANGENT	2	END-I	373.192	204.201	-44.043	-1145.18	-2609.09	1571.95
			END-J	373.192	204.201	-44.043	-1145.18	-3930.38	-4554.08
4	TANGENT	3	END-I	411.206	-19.147	-224.878	4937.73	7625.43	-515.72
			END-J	411.206	-19.147	-224.878	4937.73	879.10	58.69
5	TANGENT	1	END-I	3049.966	46.299	982.571	-549.24	5441.66	-5618.02
			END-J	3049.966	46.299	982.571	-549.24	34918.78	-7006.98
5	TANGENT	2	END-I	321.792	266.491	-16.733	-1145.18	-3930.38	-4554.08
			END-J	321.792	266.491	-16.733	-1145.18	-4432.37	-12548.81
5	TANGENT	3	END-I	535.386	15.463	-396.968	4937.73	879.10	58.69
			END-J	535.386	15.463	-396.968	4937.73	-11029.94	-405.20

PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
6	TANGENT	1	END-I	4224.956	10.609	999.521	-549.24	34918.78	-7006.98
			END-J	4224.956	10.609	999.521	-549.24	52910.16	-7197.94
6	TANGENT	2	END-I	254.402	106.781	8.837	-1145.18	-4432.37	-12548.81
			END-J	254.402	106.781	8.837	-1145.18	-4273.30	-14470.87
6	TANGENT	3	END-I	704.256	23.333	-398.328	4937.73	-11029.94	-405.20
			END-J	704.256	23.333	-398.328	4937.73	-18199.84	-825.20
7	TANGENT	1	END-I	5711.956	-34.941	842.021	-549.24	52910.16	-7197.94
			END-J	5711.956	-34.941	842.021	-549.24	68066.53	-6569.00
7	TANGENT	2	END-I	170.062	-123.539	38.117	-1145.18	-4273.30	-14470.87
			END-J	170.062	-123.539	38.117	-1145.18	-3587.19	-12247.17
7	TANGENT	3	END-I	917.866	14.833	-197.678	4937.73	-18199.84	-825.20
			END-J	917.866	14.833	-197.678	4937.73	-21758.03	-1092.19
8	TANGENT	1	END-I	7144.736	-79.241	524.891	-549.24	68066.53	-6569.00
			END-J	7144.736	-79.241	524.891	-549.24	93252.78	-2760.66
8	TANGENT	2	END-I	89.742	-300.779	65.747	-1145.18	-3587.19	-12247.17
			END-J	89.742	-300.779	65.747	-1145.18	-427.38	2208.26
8	TANGENT	3	END-I	1123.556	-5.677	200.432	4937.73	-21758.03	-1092.19
			END-J	1123.556	-5.677	200.432	4937.73	-12125.26	-819.36
9	BEND	1	END-I	8503.926	-107.399	120.851	-549.24	-2760.66	-93292.78
			CENTER	5937.241	-6089.126	120.851	-1278.56	999.93	-16292.24
			END-J	-107.399	-8503.926	120.851	864.87	4174.78	165046.97
9	BEND	2	END-I	18.702	95.057	-166.911	-1145.18	2208.26	427.38
			CENTER	80.440	53.991	-166.911	-714.90	-1169.48	-1424.75
			END-J	95.057	-18.702	-166.911	-2799.07	-3862.15	-1863.27
9	BEND	3	END-I	1317.746	1150.442	15.947	4937.73	-819.36	12125.26
			CENTER	1745.273	-118.302	15.947	3952.25	-3732.59	-700.54
			END-J	1150.442	-1317.746	15.947	-340.95	-4459.32	17144.37
10	TANGENT	1	END-I	-859.259	50.825	2891.984	864.87	-165046.97	4174.78
			END-J	-859.259	50.825	2891.984	864.87	38664.41	594.69
10	TANGENT	2	END-I	67.727	-248.141	-54.625	-2799.07	1863.27	-3862.15
			END-J	67.727	-248.141	-54.625	-2799.07	-1984.50	13616.93
10	TANGENT	3	END-I	2678.982	-123.296	298.093	-340.95	-17144.37	-4459.32
			END-J	2678.982	-123.296	298.093	-340.95	3853.30	4225.64
11	TANGENT	1	END-I	-1757.239	73.675	1162.214	864.87	38664.41	594.69
			END-J	-1757.239	73.675	1162.214	864.87	120530.79	-6594.95

PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
11	TANGENT	2	END-I	38.087	248.429	.445	-2799.07	-1984.50	13616.93
			END-J	38.087	248.429	.445	-2799.07	-1953.14	-3882.38
11	TANGENT	3	END-I	4516.562	-29.466	120.973	-340.95	3853.30	4225.64
			END-J	4516.562	-29.466	120.973	-340.95	12374.64	6301.21
12	TANGENT	1	END-I	-2382.019	70.605	-178.736	864.87	120530.79	-4594.95
			END-J	-2382.019	70.605	-178.736	864.87	116958.22	-6006.20
12	TANGENT	2	END-I	19.777	46.179	82.365	-2799.07	-1953.14	-3882.38
			END-J	19.777	46.179	82.365	-2799.07	-306.82	-4805.40
12	TANGENT	3	END-I	5805.722	55.464	-99.757	-340.95	12374.64	6301.21
			END-J	5805.722	55.464	-99.757	-340.95	10380.70	5192.59
13	TANGENT	1	END-I	-2711.359	66.785	-901.486	864.87	116958.22	-6006.20
			END-J	-2711.359	66.785	-901.486	864.87	101622.15	-7142.34
13	TANGENT	2	END-I	10.427	-16.051	121.065	-2799.07	-306.82	-4805.40
			END-J	10.427	-16.051	121.065	-2799.07	1752.74	-4532.33
13	TANGENT	3	END-I	6486.812	91.674	-196.267	-340.95	10380.70	5192.59
			END-J	6486.812	91.674	-196.267	-340.95	7041.81	3633.03
14	BEND	1	END-I	-1429.203	21.569	-933.996	-11524.85	31477.37	33297.48
			CENTER	-995.280	1025.916	-933.996	5902.43	10591.87	20279.79
			END-J	21.757	1429.200	-933.996	3455.30	-16499.19	-10231.33
14	BEND	2	END-I	391.121	2895.441	-181.720	-2800.66	4748.13	51567.82
			CENTER	2324.067	1770.669	-181.720	-219.57	1482.58	-6440.56
			END-J	2895.389	-391.502	-181.720	-703.83	-2651.58	-23580.24
14	BEND	3	END-I	-575.832	-641.271	291.231	-8082.02	-14631.10	-8982.17
			CENTER	-860.625	-46.216	291.231	-13501.52	1548.51	-438.38
			END-J	-641.195	575.916	291.231	-5891.96	16820.88	-7021.27
15	TANGENT	1	END-I	-14.571	-257.114	252.024	3457.48	18901.01	-4431.73
			END-J	-14.571	-257.114	252.024	3457.48	33833.44	10802.29
15	TANGENT	2	END-I	1575.951	237.510	-199.548	-703.48	18548.76	14798.73
			END-J	1575.951	237.510	-199.548	-703.48	6725.51	726.28
15	TANGENT	3	END-I	-461.541	322.764	191.773	-5894.17	-6928.82	16858.39
			END-J	-461.541	322.764	191.773	-5894.17	4433.75	-2265.39
16	BEND	1	END-I	-48.821	1217.896	194.456	3457.48	-10802.29	33833.44
			CENTER	826.660	895.704	194.456	-3484.92	-5958.15	7568.99
			END-J	1217.896	48.821	194.456	-4968.61	2376.20	-4168.07
16	BEND	2	END-I	273.851	399.288	56.790	-703.48	-726.28	6725.51
			CENTER	475.981	88.698	56.790	-511.99	1188.58	661.60
			END-J	399.288	-273.851	56.790	977.42	2407.17	2962.39

P I P E F O R C E S A N D M O M E N T S

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
16	BEND	3	END-I	-280.341	-100.643	54.184	-5894.17	2265.39	4433.75
			CENTER	-269.397	127.065	54.184	-2089.84	6919.10	4165.41
			END-J	-100.643	280.341	54.184	3890.91	7519.70	-957.19
17	TANGENT	1	END-I	2286.176	61.091	538.096	-4968.61	2376.20	-4168.07
			END-J	2286.176	61.091	538.096	-4968.61	18519.07	-6000.82
17	TANGENT	2	END-I	340.368	322.559	-2.160	977.42	2407.17	2962.39
			END-J	340.368	322.559	-2.160	977.42	2342.37	-6714.39
17	TANGENT	3	END-I	-3.803	170.521	-398.956	3890.91	7519.70	-957.19
			END-J	-3.803	170.521	-398.956	3890.91	-4448.97	-6072.82
18	TANGENT	1	END-I	3117.956	51.471	686.786	-4968.61	18519.07	-6000.82
			END-J	3117.956	51.471	686.786	-4968.61	39122.65	-7544.96
18	TANGENT	2	END-I	296.188	462.689	-29.970	977.42	2342.37	-6714.39
			END-J	296.188	462.689	-29.970	977.42	1443.26	-20595.06
18	TANGENT	3	END-I	71.897	95.151	-567.266	3890.91	-4448.97	-6072.82
			END-J	71.897	95.151	-567.266	3890.91	-21466.95	-8927.34
19	TANGENT	1	END-I	4252.706	20.871	708.186	-4968.61	39122.65	-7544.96
			END-J	4252.706	20.871	708.186	-4968.61	51869.99	-7920.65
19	TANGENT	2	END-I	238.348	335.279	-45.890	977.42	1443.26	-20595.06
			END-J	238.348	335.279	-45.890	977.42	617.24	-26630.09
19	TANGENT	3	END-I	175.527	11.141	-504.096	3890.91	-21466.95	-8927.34
			END-J	175.527	11.141	-504.096	3890.91	-30540.67	-9127.88
20	TANGENT	1	END-I	5690.106	-23.719	592.606	-4968.61	51869.99	-7920.65
			END-J	5690.106	-23.719	592.606	-4968.61	62536.90	-7493.71
20	TANGENT	2	END-I	166.008	33.969	-53.470	977.42	617.24	-26630.09
			END-J	166.008	33.969	-53.470	977.42	-345.23	-27241.53
20	TANGENT	3	END-I	306.897	-76.619	-189.356	3890.91	-30540.67	-9127.88
			END-J	306.897	-76.619	-189.356	3890.91	-33949.07	-7748.74
21	TANGENT	1	END-I	7257.366	-74.819	310.856	-4968.61	62536.90	-7493.71
			END-J	7257.366	-74.819	310.856	-4968.61	81516.51	-2925.59
21	TANGENT	2	END-I	88.238	-393.071	-50.550	977.42	-345.23	-27241.53
			END-J	88.238	-393.071	-50.550	977.42	-3431.62	-3242.19
21	TANGENT	3	END-I	450.217	-149.679	412.004	3890.91	-33949.07	-7748.74
			END-J	450.217	-149.679	412.004	3890.91	-8793.74	1390.06
22	TANGENT	1	END-I	8347.116	-89.839	-163.634	-4968.61	81516.51	-2925.59
			END-J	8347.116	-89.839	-163.634	-4968.61	78734.08	-1397.98

PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
22	TANGENT	2	END-I	40.038	-495.931	-52.760	977.42	-3431.62	-3242.19
			END-J	40.038	-495.931	-52.760	977.42	-4328.75	5190.61
22	TANGENT	3	END-I	550.037	-131.799	1351.814	3890.91	-8793.74	1390.06
			END-J	550.037	-131.799	1351.814	3890.91	14192.50	3631.17
23	TANGENT	1	END-I	-3284.833	-28.884	-10155.121	-533.11	180356.23	-2173.73
			END-J	-3284.833	-28.884	-10155.121	-533.11	7719.16	-1682.70
23	TANGENT	2	END-I	-53.683	-494.292	119.707	2391.54	-2576.01	-5509.75
			END-J	-53.683	-494.292	119.707	2391.54	-541.00	2893.22
23	TANGENT	3	END-I	8687.656	-8.315	-829.344	3290.22	21234.31	-257.88
			END-J	8687.656	-8.315	-829.344	3290.22	7135.47	-116.53
24	TANGENT	1	END-I	-3587.623	-33.044	-10818.541	-533.11	7719.16	-1682.70
			END-J	-3587.623	-33.044	-10818.541	-533.11	-176845.15	-1118.97
24	TANGENT	2	END-I	-61.823	-375.912	134.577	2391.54	-541.00	2893.22
			END-J	-61.823	-375.912	134.577	2391.54	1754.88	9306.28
24	TANGENT	3	END-I	9315.706	4.785	-859.654	3290.22	7135.47	-116.53
			END-J	9315.706	4.785	-859.654	3290.22	-7530.22	-198.16
25	BEND	1	END-I	-4241.953	-8914.728	-41.674	-533.11	1118.97	-176845.15
			CENTER	-9303.179	-3304.151	-41.674	-25.15	107.35	5358.96
			END-J	-8914.728	4241.953	-41.674	-381.29	-967.15	-8625.26
25	BEND	2	END-I	-78.893	-10.131	158.898	2391.54	-9306.28	1754.88
			CENTER	-62.949	48.622	158.898	-3214.01	-4226.73	1180.91
			END-J	-10.131	78.893	158.898	-3585.96	3328.78	-720.56
25	BEND	3	END-I	10674.746	6737.426	11.985	3290.22	198.16	-7530.22
			CENTER	12312.265	-2784.106	11.985	2593.03	-1881.32	-66480.90
			END-J	6737.426	-10674.746	11.985	629.63	-2858.75	134213.31
26	TANGENT	1	END-I	-8035.568	5.241	-229.716	-381.29	-8625.26	967.15
			END-J	-8035.568	5.241	-229.716	-381.29	-19881.34	710.36
26	TANGENT	2	END-I	-5.161	-617.656	-8.885	-3585.96	-720.56	-3328.78
			END-J	-5.161	-617.656	-8.885	-3585.96	-1155.92	26936.39
26	TANGENT	3	END-I	6601.756	15.625	-1610.117	629.63	134213.31	2858.75
			END-J	6601.756	15.625	-1610.117	629.63	55317.58	2093.11
27	TANGENT	1	END-I	-7279.468	7.641	17.234	-381.29	-19881.34	710.36
			END-J	-7279.468	7.641	17.234	-381.29	-19071.34	351.25
27	TANGENT	2	END-I	-1.101	349.424	3.625	-3585.96	-1155.92	26936.39
			END-J	-1.101	349.424	3.625	-3585.96	-985.54	10513.48

PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
27	TANGENT	3	END-I	6471.786	23.895	-682.357	629.63	55317.58	2093.11
			END-J	6471.786	23.895	-682.357	629.63	23246.81	970.04
28	TANGENT	1	END-I	-6579.168	8.381	230.774	-381.29	-19071.34	351.25
			END-J	-6579.168	8.381	230.774	-381.29	-8224.95	-42.64
28	TANGENT	2	END-I	2.449	439.714	14.035	-3585.96	-985.54	10513.48
			END-J	2.449	439.714	14.035	-3585.96	-325.89	-10153.05
28	TANGENT	3	END-I	6338.616	26.555	-458.347	629.63	23246.81	970.04
			END-J	6338.616	26.555	-458.347	629.63	1704.51	-278.06
29	TANGENT	1	END-I	-5917.998	6.051	302.344	-381.29	-8224.95	-42.64
			END-J	-5917.998	6.051	302.344	-381.29	5985.22	-327.02
29	TANGENT	2	END-I	5.569	8.884	16.085	-3585.96	-325.89	-10153.05
			END-J	5.569	8.884	16.085	-3585.96	430.11	-10570.58
29	TANGENT	3	END-I	6199.826	19.535	-590.897	629.63	1704.51	-278.06
			END-J	6199.826	19.535	-590.897	629.63	-26067.64	-1196.21
30	TANGENT	1	END-I	-5294.988	1.481	234.834	-381.29	5985.22	-327.02
			END-J	-5294.988	1.481	234.834	-381.29	17022.42	-396.61
30	TANGENT	2	END-I	8.259	-398.086	10.075	-3585.96	430.11	-10570.58
			END-J	8.259	-398.086	10.075	-3585.96	903.64	8139.48
30	TANGENT	3	END-I	6055.736	5.635	-623.367	629.63	-26067.64	-1196.21
			END-J	6055.736	5.635	-623.367	629.63	-55365.88	-1461.07
31	TANGENT	1	END-I	-4696.148	-3.119	107.104	-381.29	17022.42	-396.61
			END-J	-4696.148	-3.119	107.104	-381.29	19914.23	-312.39
31	TANGENT	2	END-I	10.579	-229.166	1.135	-3585.96	903.64	8139.48
			END-J	10.579	-229.166	1.135	-3585.96	934.29	14326.98
31	TANGENT	3	END-I	5903.386	-8.535	-136.457	629.63	-55365.88	-1461.07
			END-J	5903.386	-8.535	-136.457	629.63	-59050.21	-1230.63
32	TANGENT	1	END-I	-4094.598	-6.819	-14.666	-381.29	19914.23	-312.39
			END-J	-4094.598	-6.819	-14.666	-381.29	19518.25	-128.27
32	TANGENT	2	END-I	12.839	427.314	-6.915	-3585.96	934.29	14326.98
			END-J	12.839	427.314	-6.915	-3585.96	747.58	2789.51
32	TANGENT	3	END-I	5746.436	-20.135	749.993	629.63	-59050.21	-1230.63
			END-J	5746.436	-20.135	749.993	629.63	-38800.39	-686.99
33	TANGENT	1	END-I	-3527.518	-9.119	-106.356	-381.29	19518.25	-128.27
			END-J	-3527.518	-9.119	-106.356	-381.29	14732.24	282.10

PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
33	TANGENT	2	END-I	14.889	1541.684	-12.595	-3585.96	747.58	2789.51
			END-J	14.889	1541.684	-12.595	-3585.96	180.81	-66586.25
33	TANGENT	3	END-I	5594.866	-27.615	1974.253	629.63	-38800.39	-686.99
			END-J	5594.866	-27.615	1974.253	629.63	50041.00	555.67
34	TANGENT	1	END-I	-2725.858	3.394	-424.256	-381.29	14732.24	282.10
			END-J	-2725.858	3.394	-424.256	-381.29	-25996.33	-43.71
34	TANGENT	2	END-I	17.409	-1586.248	-9.709	-3585.96	180.81	-66586.25
			END-J	17.409	-1586.248	-9.709	-3585.96	-751.24	85693.56
34	TANGENT	3	END-I	5362.196	-1.425	-755.314	629.63	50041.00	555.67
			END-J	5362.196	-1.425	-755.314	629.63	-22469.16	692.51
35	TANGENT	1	END-I	-1766.768	2.804	24.274	-381.29	-25996.33	-43.71
			END-J	-1766.768	2.804	24.274	-381.29	-23666.02	-312.89
35	TANGENT	2	END-I	19.269	1161.012	5.211	-3585.96	-751.24	85693.56
			END-J	19.269	1161.012	5.211	-3585.96	-250.97	-25763.59
35	TANGENT	3	END-I	5031.876	9.125	917.486	629.63	-22469.16	692.51
			END-J	5031.876	9.125	917.486	629.63	65609.48	-183.46
36	TANGENT	1	END-I	-1136.188	1.954	136.114	-381.29	-23666.02	-312.89
			END-J	-1136.188	1.954	136.114	-381.29	-17072.11	-407.55
36	TANGENT	2	END-I	19.599	1042.132	6.621	-3585.96	-250.97	-25763.59
			END-J	19.599	1042.132	6.621	-3585.96	69.78	-76248.63
36	TANGENT	3	END-I	4775.946	8.215	648.716	629.63	65609.48	-183.46
			END-J	4775.946	8.215	648.716	629.63	97035.87	-581.40
37	TANGENT	1	END-I	692.728	8.424	496.748	.00	-41508.42	692.95
			END-J	692.728	8.424	496.748	.00	-16671.02	271.73
37	TANGENT	2	END-I	-.252	696.823	4.893	.00	-449.17	48619.15
			END-J	-.252	696.823	4.893	.00	-204.51	13778.00
37	TANGENT	3	END-I	-307.161	4.049	-1707.361	.00	135191.23	277.29
			END-J	-307.161	4.049	-1707.361	.00	49823.18	74.83
38	TANGENT	1	END-I	291.068	5.624	344.928	.00	-16671.02	271.73
			END-J	291.068	5.624	344.928	.00	-804.34	13.01
38	TANGENT	2	END-I	-.112	286.853	4.223	.00	-204.51	13778.00
			END-J	-.112	286.853	4.223	.00	-10.24	582.76
38	TANGENT	3	END-I	-129.251	1.559	-1032.201	.00	49823.18	74.83
			END-J	-129.251	1.559	-1032.201	.00	2341.93	3.11

P I P E F O R C E S A N D M O M E N T S

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
39	TANGENT	1	END-I	48.828	1.084	67.028	.00	-804.34	13.01
			END-J	48.828	1.084	67.028	.00	.00	.00
39	TANGENT	2	END-I	-.022	48.563	.853	.00	-10.24	582.76
			END-J	-.022	48.563	.853	.00	.00	.00
39	TANGENT	3	END-I	-21.641	.259	-195.161	.00	2341.93	3.11
			END-J	-21.641	.259	-195.161	.00	.00	.00
40	TANGENT	1	END-I	206.581	-3.510	368.232	-381.29	24436.31	285.40
			END-J	206.581	-3.510	368.232	-381.29	46366.74	494.46
40	TANGENT	2	END-I	19.167	-356.001	4.374	-3585.96	518.95	-27629.48
			END-J	19.167	-356.001	4.374	-3585.96	779.47	-6427.47
40	TANGENT	3	END-I	4183.065	-.695	-975.685	629.63	-38155.36	-304.11
			END-J	4183.065	-.695	-975.685	629.63	-96263.26	-262.75
41	TANGENT	1	END-I	659.281	2.830	-152.898	-381.29	46366.74	494.46
			END-J	659.281	2.830	-152.898	-381.29	37192.86	324.69
41	TANGENT	2	END-I	18.657	-546.321	-5.336	-3585.96	779.47	-6427.47
			END-J	18.657	-546.321	-5.336	-3585.96	459.34	26351.79
41	TANGENT	3	END-I	3968.915	-4.265	228.505	629.63	-96263.26	-262.75
			END-J	3968.915	-4.265	228.505	629.63	-82552.97	-6.87
42	TANGENT	1	END-I	1040.071	7.880	-604.318	-381.29	37192.86	324.69
			END-J	1040.071	7.880	-604.318	-381.29	8185.60	-53.53
42	TANGENT	2	END-I	17.907	210.409	-11.986	-3585.96	459.34	26351.79
			END-J	17.907	210.409	-11.986	-3585.96	-115.97	16252.17
42	TANGENT	3	END-I	3776.215	-5.725	2217.395	629.63	-82552.97	-6.87
			END-J	3776.215	-5.725	2217.395	629.63	23881.99	267.91
43	TANGENT	1	END-I	1280.421	9.120	-731.758	-381.29	8185.60	-53.53
			END-J	1280.421	9.120	-731.758	-381.29	-9376.59	-272.41
43	TANGENT	2	END-I	17.277	1322.849	-13.446	-3585.96	-115.97	16252.17
			END-J	17.277	1322.849	-13.446	-3585.96	-438.67	-15496.21
43	TANGENT	3	END-I	3648.555	-5.835	3649.905	629.63	23881.99	267.91
			END-J	3648.555	-5.835	3649.905	629.63	111479.70	407.94
44	BEND	1	END-I	1542.331	1617.179	-11.560	-381.29	272.41	-9376.59
			CENTER	2234.111	52.926	-11.560	-198.88	167.96	-34280.68
			END-J	1617.179	-1542.331	-11.560	-143.76	-34.88	-12071.14
44	BEND	2	END-I	16.497	.196	-1268.047	-3585.96	15496.21	-438.67
			CENTER	11.804	-11.527	-1268.047	-4948.67	-18786.09	-269.72
			END-J	.196	-16.497	-1268.047	-30153.50	-42063.75	148.17

PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
44	BEND	3	END-I	3506.345	6886.169	9.422	629.63	-407.94	111479.70
			CENTER	7348.617	2389.896	9.422	256.10	-493.84	-26842.08
			END-J	6886.169	-3506.345	9.422	-68.76	-290.45	-10193.93
45	TANGENT	1	END-I	1379.589	-8.780	1803.601	-143.76	-12071.14	34.88
			END-J	1379.589	-8.780	1803.601	-143.76	112377.29	640.71
45	TANGENT	2	END-I	1.046	456.553	12.127	-30153.50	148.17	42063.75
			END-J	1.046	456.553	12.127	-30153.50	984.96	10561.62
45	TANGENT	3	END-I	6202.489	8.552	2052.655	-68.76	-10193.93	290.45
			END-J	6202.489	8.552	2052.655	-68.76	131439.29	-299.61
46	TANGENT	1	END-I	1118.819	-2.930	1117.821	-143.76	112377.29	640.71
			END-J	1118.819	-2.930	1117.821	-143.76	142558.45	719.83
46	TANGENT	2	END-I	1.806	925.903	4.477	-30153.50	984.96	10561.62
			END-J	1.806	925.903	4.477	-30153.50	1105.85	-14437.75
46	TANGENT	3	END-I	5654.729	6.742	879.195	-68.76	131439.29	-299.61
			END-J	5654.729	6.742	879.195	-68.76	155177.57	-481.63
47	TANGENT	1	END-I	703.219	3.310	-581.019	-202.44	135527.65	719.83
			END-J	703.219	3.310	-581.019	-202.44	119840.12	630.47
47	TANGENT	2	END-I	1.086	173.933	-9.323	1529.02	1057.61	-14437.75
			END-J	1.086	173.933	-9.323	1529.02	805.90	-19133.92
47	TANGENT	3	END-I	4056.359	-5.288	-959.985	315.72	113695.85	-481.63
			END-J	4056.359	-5.288	-959.985	315.72	87776.26	-338.84
48	TANGENT	1	END-I	1019.730	-1.630	-195.300	.00	7030.80	-58.68
			END-J	1019.730	-1.630	-195.300	.00	.00	.00
48	TANGENT	2	END-I	8.280	880.070	-1.340	.00	48.24	31682.52
			END-J	8.280	880.070	-1.340	.00	.00	.00
48	TANGENT	3	END-I	1103.590	10.680	-1152.270	.00	41481.72	384.48
			END-J	1103.590	10.680	-1152.270	.00	.00	.00
49	TANGENT	1	END-I	389.029	9.030	-1591.529	-202.44	119840.12	630.47
			END-J	389.029	9.030	-1591.529	-202.44	5250.00	-19.68
49	TANGENT	2	END-I	1.956	34.383	-15.113	1529.02	805.90	-19133.92
			END-J	1.956	34.383	-15.113	1529.02	-282.20	-21609.47
49	TANGENT	3	END-I	3439.849	-6.608	-1625.715	315.72	87776.26	-338.84
			END-J	3439.849	-6.608	-1625.715	315.72	-29275.19	136.96
50	TANGENT	1	END-I	-42.151	9.990	-1999.539	-202.44	5250.00	-19.68
			END-J	-42.151	9.990	-1999.539	-202.44	-138716.85	-738.94

PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
50	TANGENT	2	END-I	3.046	-525.307	-11.163	1529.02	-292.20	-21609.47
			END-J	3.046	-525.307	-11.163	1529.02	-1085.90	16212.67
50	TANGENT	3	END-I	2722.249	-4.108	-1151.695	315.72	-29275.19	136.96
			END-J	2722.249	-4.108	-1151.695	315.72	-112197.20	432.77
51	TANGENT	1	END-I	-392.221	6.200	-783.289	-202.44	-138716.85	-738.94
			END-J	-392.221	6.200	-783.289	-202.44	-159865.66	-906.34
51	TANGENT	2	END-I	3.856	-198.037	-2.863	1529.02	-1085.90	16212.67
			END-J	3.856	-198.037	-2.863	1529.02	-1163.19	21559.68
51	TANGENT	3	END-I	2217.639	-.188	-356.805	315.72	-112197.20	432.77
			END-J	2217.639	-.188	-356.805	315.72	-121830.92	437.86
52	TANGENT	1	END-I	-1759.451	-7.900	2354.121	200.04	-200079.46	-906.34
			END-J	-1759.451	-7.900	2354.121	200.04	-136518.21	-693.03
52	TANGENT	2	END-I	6.516	-561.107	11.067	35508.70	-1087.95	21559.68
			END-J	6.516	-561.107	11.067	35508.70	-789.13	36709.58
52	TANGENT	3	END-I	1487.659	3.552	940.165	275.40	-135406.52	437.86
			END-J	1487.659	3.552	940.165	275.40	-110022.06	341.96
53	TANGENT	1	END-I	-1882.530	11.180	-1117.050	.00	40213.80	402.48
			END-J	-1882.530	11.180	-1117.050	.00	.00	.00
53	TANGENT	2	END-I	-8.360	943.880	2.090	.00	-75.24	33979.68
			END-J	-8.360	943.880	2.090	.00	.00	.00
53	TANGENT	3	END-I	-778.390	-1.120	-377.100	.00	13575.60	-40.32
			END-J	-778.390	-1.120	-377.100	.00	.00	.00
54	TANGENT	1	END-I	-2102.851	-11.620	4553.441	200.04	-136518.21	-693.03
			END-J	-2102.851	-11.620	4553.441	200.04	177669.19	108.76
54	TANGENT	2	END-I	7.276	758.103	17.457	35508.70	-789.13	36709.58
			END-J	7.276	758.103	17.457	35508.70	415.43	-15599.49
54	TANGENT	3	END-I	1009.679	6.582	1530.025	275.40	-110022.06	341.96
			END-J	1009.679	6.582	1530.025	275.40	-4450.31	-112.17
55	BEND	1	END-I	-2500.231	-9390.827	-.305	200.04	108.76	-177669.19
			CENTER	-8408.247	-4872.387	-.305	215.13	-72.32	35019.41
			END-J	-9390.827	2500.231	-.305	97.77	-211.03	70392.26
55	BEND	2	END-I	8.076	-.009	499.287	35508.70	-15599.49	-415.43
			CENTER	5.705	-5.717	499.287	19342.49	-23429.18	-330.05
			END-J	-.009	-8.076	499.287	2374.84	-17534.37	-124.36
55	BEND	3	END-I	485.179	1904.892	4.153	275.40	-112.17	4450.31
			CENTER	1690.035	1003.889	4.153	159.22	-168.32	-38924.52
			END-J	1904.892	-485.179	4.153	37.35	-125.88	-46659.36

PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
56	TANGENT	1	END-I	-8257.607	.325	1995.941	97.77	-70392.26	-211.03
			END-J	-8257.607	.325	1995.941	97.77	-4526.21	-221.77
56	TANGENT	2	END-I	-.549	340.473	-8.136	2374.84	124.36	-17534.37
			END-J	-.549	340.473	-8.136	2374.84	-144.14	-28769.98
56	TANGENT	3	END-I	1604.672	-4.683	-413.389	37.35	46659.36	-125.88
			END-J	1604.672	-4.683	-413.389	37.35	33017.54	28.67
57	TANGENT	1	END-I	-7365.117	.095	1434.221	97.77	-4526.21	-221.77
			END-J	-7365.117	.095	1434.221	97.77	34197.75	-224.35
57	TANGENT	2	END-I	-.979	414.283	-7.116	2374.84	-144.14	-28769.98
			END-J	-.979	414.283	-7.116	2374.84	-336.29	-39955.62
57	TANGENT	3	END-I	1362.372	-4.543	-457.699	37.35	33017.54	28.67
			END-J	1362.372	-4.543	-457.699	37.35	20659.68	151.34
58	TANGENT	1	END-I	-5017.927	-1.905	-113.099	160.41	84002.31	-224.35
			END-J	-5017.927	-1.905	-113.099	160.41	80948.63	-172.92
58	TANGENT	2	END-I	-3.529	-381.517	-2.386	22526.92	-411.17	-39955.62
			END-J	-3.529	-381.517	-2.386	22526.92	-475.60	-29654.66
58	TANGENT	3	END-I	649.632	-2.203	-589.339	-25.29	4504.32	151.34
			END-J	649.632	-2.203	-589.339	-25.29	-11407.82	210.83
59	TANGENT	1	END-I	928.620	1.740	1383.460	.00	-49804.56	62.64
			END-J	928.620	1.740	1383.460	.00	.00	.00
59	TANGENT	2	END-I	-2.840	559.780	-2.080	.00	74.88	20152.08
			END-J	-2.840	559.780	2.080	.00	.00	.00
59	TANGENT	3	END-I	79.260	-1.740	.760	.00	16155.36	-62.64
			END-J	79.260	-1.740	-2.760	.00	.00	.00
60	TANGENT	1	END-I	-4034.897	-2.085	-696.259	160.41	80948.63	-172.92
			END-J	-4034.897	-2.085	-696.259	160.41	51705.75	-85.37
60	TANGENT	2	END-I	-4.009	-807.277	.174	22526.92	-475.60	-29654.66
			END-J	-4.009	-807.277	.174	22526.92	-468.31	4250.97
60	TANGENT	3	END-I	378.432	-1.223	-590.199	-25.29	-11407.82	210.83
			END-J	378.432	-1.223	-590.199	-25.29	-36196.16	262.21
61	TANGENT	1	END-I	-3080.347	-1.925	-1044.769	160.41	51705.75	-85.37
			END-J	-3080.347	-1.925	-1044.769	160.41	23496.98	-33.41
61	TANGENT	2	END-I	-4.469	-1000.077	2.824	22526.92	-468.31	4250.97
			END-J	-4.469	-1000.077	2.824	22526.92	-392.08	31253.05

P I P E F O R C E S A N D M O M E N T S

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
61	TANGENT	3	END-I	109.112	-.053	-303.599	-25.29	-36196.16	262.21
			END-J	109.112	-.053	-303.599	-25.29	-44393.32	263.64
62	TANGENT	1	END-I	-1184.117	-1.035	-1399.199	142.41	58653.86	-33.41
			END-J	-1184.117	-1.035	-1399.199	142.41	20875.48	-5.47
62	TANGENT	2	END-I	-4.479	-453.307	8.094	11213.92	-376.60	31253.05
			END-J	-4.479	-453.307	8.094	11213.92	-158.07	43492.33
62	TANGENT	3	END-I	-1161.488	2.947	1123.521	-98.01	-80736.04	263.64
			END-J	-1161.488	2.947	1123.521	-98.01	-50400.96	184.08
63	TANGENT	1	END-I	212.700	-.500	976.580	.00	-35156.88	-18.00
			END-J	212.700	-.500	976.580	.00	.00	.00
63	TANGENT	2	END-I	-3.160	-314.250	.430	.00	-15.48	-11313.00
			END-J	-3.160	-314.250	.430	.00	.00	.00
63	TANGENT	3	END-I	-856.140	-2.020	-1009.520	.00	36342.72	-72.72
			END-J	-856.140	-2.020	-1009.520	.00	.00	.00
64	TANGENT	1	END-I	-485.077	-.585	-1360.169	142.41	20875.48	-5.47
			END-J	-485.077	-.585	-1360.169	142.41	-7688.07	6.80
64	TANGENT	2	END-I	-4.809	110.983	9.204	11213.92	-158.07	43492.33
			END-J	-4.809	110.983	9.204	11213.92	35.20	41161.69
64	TANGENT	3	END-I	-1360.698	3.487	1813.231	-98.01	-50400.96	184.08
			END-J	-1360.698	3.487	1813.231	-98.01	-12323.10	110.86
65	BEND	1	END-I	400.303	1190.909	.125	142.41	-6.80	-7688.07
			CENTER	1125.157	559.043	.125	97.21	-102.32	-33782.81
			END-J	1190.909	-400.303	.125	-2.29	-137.89	-36149.88
65	BEND	2	END-I	-5.219	-10.014	1289.073	11213.92	-41161.69	35.20
			CENTER	-10.771	-3.390	1289.073	-7584.09	-4220.71	235.08
			END-J	-10.014	5.219	1289.073	5244.94	35192.71	207.81
65	BEND	3	END-I	-1614.428	-2977.601	3.867	-98.01	-110.86	-12323.10
			CENTER	-3247.055	-963.909	3.867	-106.92	89.34	46451.47
			END-J	-2977.601	1614.428	3.867	28.34	237.21	36751.12
66	TANGENT	1	END-I	1259.819	4.831	1161.443	-2.29	-36149.88	137.89
			END-J	1259.819	4.831	1161.443	-2.29	61411.37	-267.89
66	TANGENT	2	END-I	-10.584	-425.028	-5.589	5244.94	207.81	-35192.71
			END-J	-10.584	-425.028	-5.589	5244.94	-261.67	509.66
66	TANGENT	3	END-I	-6011.281	-5.751	-1246.798	28.34	36751.12	-237.21
			END-J	-6011.281	-5.751	-1246.798	28.34	-67979.94	245.83

P I P E F O R C E S A N D M O M E N T S

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
67	TANGENT	1	END-I	1290.659	2.121	296.893	-2.29	61411.37	-267.89
			END-J	1290.659	2.121	296.893	-2.29	68536.82	-318.79
67	TANGENT	2	END-I	-10.834	-107.138	-2.719	5244.94	-261.67	509.66
			END-J	-10.834	-107.138	-2.719	5244.94	-326.93	3080.98
67	TANGENT	3	END-I	-7874.901	-2.821	-469.348	28.34	-67979.94	245.83
			END-J	-7874.901	-2.821	-469.348	28.34	-79244.31	313.53
68	TANGENT	1	END-I	1309.299	.041	-346.777	-2.29	68536.82	-318.79
			END-J	1309.299	.041	-346.777	-2.29	38020.48	-322.38
68	TANGENT	2	END-I	-10.984	-99.348	-.439	5244.94	-326.93	3080.98
			END-J	-10.984	-99.348	-.439	5244.94	-365.56	11823.63
68	TANGENT	3	END-I	-9117.181	-.511	71.112	28.34	-79244.31	313.53
			END-J	-9117.181	-.511	71.112	28.34	-72986.49	358.45
69	TANGENT	1	END-I	1333.469	-4.039	-902.907	-2.29	38020.48	-322.38
			END-J	1333.469	-4.039	-902.907	-2.29	-41435.29	33.07
69	TANGENT	2	END-I	-11.184	-245.878	4.351	5244.94	-365.56	11823.63
			END-J	-11.184	-245.878	4.351	5244.94	17.32	33460.92
69	TANGENT	3	END-I	-11537.011	4.289	915.392	28.34	-72986.49	358.45
			END-J	-11537.011	4.289	915.392	28.34	7567.97	-19.02
70	TANGENT	1	END-I	1345.579	-5.849	396.563	-2.29	-41435.29	33.07
			END-J	1345.579	-5.849	396.563	-2.29	-6537.71	547.80
70	TANGENT	2	END-I	-11.284	1122.312	6.551	5244.94	17.32	33460.92
			END-J	-11.284	1122.312	6.551	5244.94	593.81	-65302.52
70	TANGENT	3	END-I	-13969.521	6.489	1244.972	28.34	7567.97	-19.02
			END-J	-13969.521	6.489	1244.972	28.34	117125.47	-590.10

S U M M A R Y O F S U P P O R T F O R C E S/M O M E N T S I N G L O B A L / L O C A L S Y S T E M S

BDRY= BOUNDARY ELEMENTS (SPRING)
THAM= THERMAL ANCHOR MOTION
SEAM= SEISMIC ANCHOR MOTION
SNBR= SNUBBER ELEMENT

L O A D C A S E 1

KIND OF SUPPORT	NODE NUMBER	GLOBAL COMPONENTS FX	FY	FZ	MX	MY	MZ	LOCAL COMPONENTS FL	ML
BDRY	1	-2471.	0.	0.	0.	0.	0.	-2471.	0.
BDRY	1	0.	233.	0.	0.	0.	0.	233.	0.
BDRY	1	0.	0.	-534.	0.	0.	0.	-534.	0.
BDRY	1	0.	0.	0.	33206.	0.	0.	0.	33206.
BDRY	1	0.	0.	0.	0.	23193.	0.	0.	23193.
BDRY	1	0.	0.	0.	0.	0.	-44166.	0.	-44166.
BDRY	10	-12944.	0.	0.	0.	0.	0.	-12944.	0.
BDRY	10	0.	172.	0.	0.	0.	0.	172.	0.
BDRY	14	-2291.	0.	0.	0.	0.	0.	-2291.	0.
BDRY	14	0.	-22.	0.	0.	0.	0.	-22.	0.
BDRY	14	0.	0.	-350.	0.	0.	0.	-350.	0.
BDRY	14	0.	0.	0.	15396.	0.	0.	0.	15396.
BDRY	14	0.	0.	0.	0.	-31477.	0.	0.	-31477.
BDRY	14	0.	0.	0.	0.	0.	-31694.	0.	-31694.
BDRY	14	0.	0.	0.	0.	0.	0.	-21096.	0.
BDRY	25	-21096.	0.	0.	0.	0.	0.	47.	0.
BDRY	26	0.	47.	0.	0.	0.	0.	4012.	0.
BDRY	26	0.	0.	4012.	0.	0.	0.	13.	0.
BDRY	34	0.	13.	0.	0.	0.	0.	-318.	0.
BDRY	34	0.	0.	-318.	0.	0.	0.	-1.	0.
BDRY	40	-1.	0.	0.	0.	0.	0.	0.	0.
BDRY	40	0.	0.	0.	0.	0.	0.	0.	0.
BDRY	40	0.	0.	0.	0.	0.	0.	-21.	0.
BDRY	44	0.	-21.	0.	0.	0.	0.	-885.	0.
BDRY	44	0.	0.	-885.	0.	0.	0.	-16821.	0.
BDRY	55	-16821.	0.	0.	0.	0.	0.	12.	0.
BDRY	55	0.	12.	0.	0.	0.	0.	5.	0.
BDRY	66	0.	5.	0.	0.	0.	0.	-1664.	0.
BDRY	71	-1664.	0.	0.	0.	0.	0.	6.	0.
BDRY	71	0.	6.	0.	0.	0.	0.	1346.	0.
BDRY	71	0.	0.	1346.	0.	0.	0.	0.	-548.
BDRY	71	0.	0.	0.	-548.	0.	0.	0.	6538.
BDRY	71	0.	0.	0.	0.	6538.	0.	0.	-2.
BDRY	71	0.	0.	0.	0.	0.	-2.		

SUMMARY OF SUPPORT FORCES/MOMENTS IN GLOBAL/LOCAL SYSTEMS

BDRY= BOUNDARY ELEMENTS (SPRING)
THAM= THERMAL ANCHOR MOTION
SEAM= SEISMIC ANCHOR MOTION
SNBR= SNUBBER ELEMENT

LOAD CASE 2

KIND OF SUPPORT	NODE NUMBER	GLOBAL COMPONENTS FX	FY	FZ	MX	MY	MZ	LOCAL COMPONENTS FL	ML
BDRY	1	176.	0.	0.	0.	0.	0.	176.	0.
BDRY	1	0.	-3472.	0.	0.	0.	0.	-3472.	0.
BDRY	1	0.	0.	-368.	0.	0.	0.	-368.	0.
BDRY	1	0.	0.	0.	-34695.	0.	0.	0.	-34695.
BDRY	1	0.	0.	0.	0.	4382.	0.	0.	4382.
BDRY	1	0.	0.	0.	0.	0.	-36747.	0.	-36747.
BDRY	10	36.	0.	0.	0.	0.	0.	36.	0.
BDRY	10	0.	-2020.	0.	0.	0.	0.	-2020.	0.
BDRY	14	148.	0.	0.	0.	0.	0.	148.	0.
BDRY	14	0.	-3539.	0.	0.	0.	0.	-3539.	0.
BDRY	14	0.	0.	405.	0.	0.	0.	405.	0.
BDRY	14	0.	0.	0.	34469.	0.	0.	0.	34469.
BDRY	14	0.	0.	0.	0.	-4748.	0.	0.	-4748.
BDRY	14	0.	0.	0.	0.	0.	-38430.	0.	-38430.
BDRY	25	124.	0.	0.	0.	0.	0.	124.	0.
BDRY	26	0.	-2803.	0.	0.	0.	0.	-2803.	0.
BDRY	26	0.	0.	70.	0.	0.	0.	70.	0.
BDRY	34	0.	-5835.	0.	0.	0.	0.	-5835.	0.
BDRY	34	0.	0.	3.	0.	0.	0.	3.	0.
BDRY	40	0.	0.	0.	0.	0.	0.	0.	0.
BDRY	40	0.	0.	0.	0.	0.	0.	0.	0.
BDRY	40	0.	0.	0.	0.	0.	0.	0.	0.
BDRY	44	0.	-4138.	0.	0.	0.	0.	-4138.	0.
BDRY	44	0.	0.	13.	0.	0.	0.	13.	0.
BDRY	55	-17.	0.	0.	0.	0.	0.	-17.	0.
BDRY	55	0.	-4241.	0.	0.	0.	0.	-4241.	0.
BDRY	66	0.	-5054.	0.	0.	0.	0.	-5054.	0.
BDRY	71	-7.	0.	0.	0.	0.	0.	-7.	0.
BDRY	71	0.	-2437.	0.	0.	0.	0.	-2437.	0.
BDRY	71	0.	0.	-11.	0.	0.	0.	-11.	0.
BDRY	71	0.	0.	0.	65303.	0.	0.	0.	65303.
BDRY	71	0.	0.	0.	0.	-594.	0.	0.	-594.
BDRY	71	0.	0.	0.	0.	0.	5245.	0.	5245.

S U M M A R Y O F S U P P O R T F O R C E S/M O M E N T S I N G L O B A L / L O C A L S Y S T E M S

BDRY= BOUNDARY ELEMENTS (SPRING)
THAM= THERMAL ANCHOR MOTION
SEAM= SEISMIC ANCHOR MOTION
SNBR= SNUBBER ELEMENT

L O A D C A S E 3

KIND OF SUPPORT	NODE NUMBER	GLOBAL COMPONENTS FX	FY	FZ	MX	MY	MZ	LOCAL COMPONENTS FL	ML
BDRY	1	-36.	0.	0.	0.	0.	0.	-36.	0.
BDRY	1	0.	-448.	0.	0.	0.	0.	-448.	0.
BDRY	1	0.	0.	-1294.	0.	0.	0.	-1294.	0.
BDRY	1	0.	0.	0.	-6510.	0.	0.	0.	-6510.
BDRY	1	0.	0.	0.	0.	18067.	0.	0.	18067.
BDRY	1	0.	0.	0.	0.	0.	-5216.	0.	-5216.
BDRY	10	-1616.	0.	0.	0.	0.	0.	-1616.	0.
BDRY	10	0.	-107.	0.	0.	0.	0.	-107.	0.
BDRY	14	-201.	0.	0.	0.	0.	0.	-201.	0.
BDRY	14	0.	641.	0.	0.	0.	0.	641.	0.
BDRY	14	0.	0.	-1212.	0.	0.	0.	-1212.	0.
BDRY	14	0.	0.	0.	-12066.	0.	0.	0.	-12066.
BDRY	14	0.	0.	0.	0.	14631.	0.	0.	14631.
BDRY	14	0.	0.	0.	0.	0.	637.	0.	637.
BDRY	25	5878.	0.	0.	0.	0.	0.	5878.	0.
BDRY	26	0.	4.	0.	0.	0.	0.	4.	0.
BDRY	26	0.	0.	-14170.	0.	0.	0.	-14170.	0.
BDRY	34	0.	26.	0.	0.	0.	0.	26.	0.
BDRY	34	0.	0.	-5248.	0.	0.	0.	-5248.	0.
BDRY	40	1.	0.	0.	0.	0.	0.	1.	0.
BDRY	40	0.	0.	0.	0.	0.	0.	0.	0.
BDRY	40	0.	0.	1.	0.	0.	0.	1.	0.
BDRY	44	0.	15.	0.	0.	0.	0.	15.	0.
BDRY	44	0.	0.	-11975.	0.	0.	0.	-11975.	0.
BDRY	55	375.	0.	0.	0.	0.	0.	375.	0.
BDRY	55	0.	-11.	0.	0.	0.	0.	-11.	0.
BDRY	66	0.	-10.	0.	0.	0.	0.	-10.	0.
BDRY	71	-1245.	0.	0.	0.	0.	0.	-1245.	0.
BDRY	71	0.	-6.	0.	0.	0.	0.	-6.	0.
BDRY	71	0.	0.	-15192.	0.	0.	0.	-15192.	0.
BDRY	71	0.	0.	0.	590.	0.	0.	0.	590.
BDRY	71	0.	0.	0.	0.	-117125.	0.	0.	-117125.
BDRY	71	0.	0.	0.	0.	0.	28.	0.	28.

S T A T I C S O L U T I O N T I M E L O G

EQUATION SOLUTION = .00
DISPLACEMENT OUTPUT = .00
STRESS RECOVERY = .00

BENCHMARK PROBLEM 1

TOTAL RESPONSE

********** FINAL RESULTS - SRSS COMBINATION OF DYNAMIC RESPONSES WITH HIGH FREQUENCY MODE RESPONSES **********
MODAL COMBINATION METHOD 2-GROUPING

NODE	DISPLACEMENTS / ROTATIONS						ACCELERATIONS IN G'S		
NODE NUMBER	X-TRANSLATION	Y-TRANSLATION	Z-TRANSLATION	X-ROTATION	Y-ROTATION	Z-ROTATION	X-DIRECTION	Y-DIRECTION	Z-DIRECTION
1	.75769E-09	.15677E-08	.17325E-08	.11596E-08	.21405E-09	.16870E-09	.000	.000	.000
2	.10255E-01	.23519E-01	.48204E-01	.22318E-02	.46656E-03	.45610E-03	.214	.532	1.123
3	.34293E-01	.23564E-01	.19201E+00	.24298E-02	.50222E-03	.34030E-03	1.070	.540	4.126
4	.38725E-01	.31808E-01	.24532E+00	.19647E-02	.10142E-02	.81517E-03	.820	1.446	4.825
5	.38702E-01	.50633E-01	.21696E+00	.20026E-02	.12306E-02	.76586E-03	.820	3.036	4.181
6	.38664E-01	.69237E-01	.18255E+00	.21060E-02	.14659E-02	.58798E-03	.819	4.293	3.412
7	.38649E-01	.78026E-01	.16017E+00	.21417E-02	.15225E-02	.52809E-03	.819	4.798	2.920
8	.38628E-01	.85579E-01	.13873E+00	.21808E-02	.15692E-02	.46863E-03	.818	5.189	2.517
9	.38474E-01	.94721E-01	.90249E-01	.25060E-02	.16704E-02	.33735E-03	.813	5.375	1.677
10	.21096E-08	.29467E-08	.92208E-01	.31993E-02	.99139E-03	.60050E-03	.000	.000	1.894
11	.60738E-01	.21021E+00	.91971E-01	.20822E-02	.58549E-03	.58156E-03	1.010	11.383	1.890
12	.69435E-01	.26156E+00	.91593E-01	.99544E-03	.51591E-03	.63415E-03	1.151	14.023	1.880
13	.56956E-01	.23657E+00	.91479E-01	.16676E-02	.80831E-03	.65133E-03	.960	12.588	1.877
14	.15650E-08	.32123E-08	.23341E-08	.17237E-08	.41983E-09	.46041E-09	.000	.000	.000
15	.15082E-01	.28253E-01	.62333E-01	.27884E-02	.79228E-03	.45440E-03	.588	1.110	2.188
16	.41622E-01	.29112E-01	.24002E+00	.30006E-02	.69740E-03	.37623E-03	1.457	1.157	8.164
17	.42754E-01	.59752E-01	.29639E+00	.20382E-02	.15788E-02	.17396E-02	.811	2.971	9.502
18	.42702E-01	.10656E+00	.25474E+00	.19073E-02	.18086E-02	.16230E-02	.802	5.510	7.540
19	.42641E-01	.14984E+00	.20914E+00	.18388E-02	.19583E-02	.12252E-02	.793	7.741	5.386
20	.42619E-01	.17055E+00	.18242E+00	.18324E-02	.19675E-02	.10849E-02	.790	8.812	4.104
21	.42592E-01	.18807E+00	.15829E+00	.18304E-02	.19422E-02	.93348E-03	.787	9.717	2.907
22	.42358E-01	.20815E+00	.10377E+00	.19771E-02	.11566E-02	.48483E-03	.763	10.860	1.768
23	.42285E-01	.20611E+00	.91390E-01	.20638E-02	.10057E-02	.66264E-03	.756	10.852	1.874
24	.23550E-01	.16824E+00	.91325E-01	.24406E-02	.12423E-02	.79718E-03	.446	8.684	1.877
25	.13555E-07	.12615E+00	.91251E-01	.27179E-02	.15297E-02	.93406E-03	.000	6.236	1.879
26	.94850E-01	.12602E-07	.34402E-08	.32799E-02	.19164E-02	.23980E-02	2.119	.000	.000
27	.97289E-01	.13326E+00	.86898E-01	.31482E-02	.15376E-02	.26038E-02	2.205	6.377	2.442
28	.99567E-01	.24874E+00	.14792E+00	.30312E-02	.10260E-02	.19625E-02	2.286	12.002	4.480
29	.10178E+00	.31649E+00	.18066E+00	.29244E-02	.35693E-03	.74452E-03	2.364	15.232	5.718
30	.10392E+00	.31601E+00	.17800E+00	.28290E-02	.48613E-03	.80420E-03	2.436	15.010	5.692
31	.10599E+00	.24555E+00	.13967E+00	.27465E-02	.11429E-02	.21007E-02	2.510	11.354	4.376
32	.10654E+00	.18480E+00	.10658E+00	.27283E-02	.12823E-02	.23342E-02	2.528	8.345	3.258
33	.10706E+00	.11873E+00	.70051E-01	.27110E-02	.13859E-02	.24660E-02	2.546	5.140	2.051
34	.10880E+00	.10370E-07	.44573E-08	.26515E-02	.16024E-02	.24976E-02	2.604	.000	.000
35	.11229E+00	.23999E+00	.15802E+00	.25806E-02	.14854E-02	.23913E-02	2.718	3.682	2.692
36	.11540E+00	.40305E+00	.25223E+00	.25846E-02	.58026E-03	.10713E-02	2.815	5.117	3.808
37	.11683E+00	.40714E+00	.24681E+00	.26132E-02	.88718E-03	.91838E-03	2.858	5.902	3.451
38	.11694E+00	.44619E+00	.27932E+00	.26132E-02	.96155E-03	.98374E-03	2.863	5.891	4.501
39	.11698E+00	.48502E+00	.31409E+00	.26132E-02	.97917E-03	.99938E-03	2.865	6.154	5.689
40	.11698E+00	.49532E+00	.32328E+00	.26132E-02	.97937E-03	.99954E-03	2.865	6.263	6.013
41	.11817E+00	.32857E+00	.19290E+00	.26717E-02	.12966E-02	.19017E-02	2.893	5.630	2.515
42	.11937E+00	.19108E+00	.11652E+00	.27646E-02	.14960E-02	.25397E-02	2.921	3.770	2.095
43	.12022E+00	.62735E-01	.42215E-01	.28610E-02	.16643E-02	.25977E-02	2.939	1.358	1.000
44	.12061E+00	.71739E-08	.16236E-07	.29143E-02	.18403E-02	.24592E-02	2.947	.000	.000
45	.14922E+00	.10911E+00	.87981E-01	.28084E-02	.16383E-02	.21661E-02	2.644	1.737	3.005
46	.23553E+00	.26173E+00	.91706E-01	.17466E-02	.10538E-02	.24560E-02	3.094	3.142	3.174
47	.25731E+00	.30440E+00	.92147E-01	.15472E-02	.96613E-03	.25053E-02	3.175	3.671	3.194
48	.27606E+00	.34152E+00	.92543E-01	.13194E-02	.86334E-03	.25372E-02	3.350	4.195	3.212
49	.25734E+00	.32561E+00	.10020E+00	.15472E-02	.96459E-03	.25123E-02	3.176	4.440	2.882
50	.28340E+00	.37294E+00	.94655E-01	.45072E-03	.67485E-03	.27907E-02	3.736	4.853	3.306
51	.21420E+00	.28572E+00	.96546E-01	.19173E-02	.14747E-02	.30924E-02	3.362	3.884	3.389
52	.17308E+00	.23103E+00	.96845E-01	.20946E-02	.15936E-02	.31396E-02	2.874	3.178	3.402
53	.12879E+00	.17184E+00	.97083E-01	.22295E-02	.16827E-02	.31625E-02	2.289	2.398	3.413
54	.17310E+00	.25782E+00	.10134E+00	.20946E-02	.15959E-02	.31487E-02	2.875	4.364	3.764
55	.58736E-08	.10171E-07	.98233E-01	.24515E-02	.18701E-02	.33275E-02	.000	.000	3.460
56	.63182E-01	.13481E+00	.13064E+00	.20154E-02	.89544E-03	.23732E-02	1.999	4.848	5.015
57	.63591E-01	.19647E+00	.16949E+00	.21830E-02	.44404E-03	.16982E-02	2.026	7.666	5.831
58	.63734E-01	.23474E+00	.15572E+00	.22780E-02	.28956E-03	.13727E-02	2.033	9.319	6.133

59	.63846E-01	.26339E+00	.15616E+00	.23266E-02	.23561E-03	.99919E-03	2.040	10.533	6.210
60	.56961E-01	.29079E+00	.15576E+00	.22997E-02	.28740E-03	.13727E-02	1.839	11.661	6.135
61	.64183E-01	.26629E+00	.13491E+00	.25920E-02	.88253E-03	.78911E-03	2.061	10.692	5.438
62	.64270E-01	.24155E+00	.10846E+00	.26736E-02	.10498E-02	.11342E-02	2.067	9.708	4.407
63	.64312E-01	.20669E+00	.77791E-01	.26740E-02	.11558E-02	.14212E-02	2.070	8.307	3.196
64	.96557E-01	.33081E+00	.10849E+00	.27045E-02	.10584E-02	.11342E-02	3.510	13.219	4.408
65	.64365E-01	.17069E+00	.50746E-01	.26815E-02	.12570E-02	.17911E-02	2.075	6.853	2.115
66	.42422E-01	.11609E-07	.51277E-02	.17774E-02	.69272E-03	.19984E-02	1.370	.000	.214
67	.45529E-01	.89332E-01	.37647E-02	.38724E-03	.22044E-03	.13285E-02	2.470	3.849	.156
68	.45045E-01	.94926E-01	.34199E-02	.12258E-03	.15381E-03	.11864E-02	2.554	4.147	.142
69	.33477E-01	.77164E-01	.22947E-02	.42026E-03	.20354E-03	.79093E-03	2.065	3.529	.095
70	.12844E-01	.29829E-01	.11544E-02	.50281E-03	.21693E-03	.39545E-03	.820	1.415	.048
71	.13119E-08	.29912E-08	.57261E-08	.34184E-08	.14723E-08	.12756E-08	.000	.000	.000

********** FINAL RESULTS - SRSS COMBINATION OF DYNAMIC RESPONSES WITH HIGH FREQUENCY MODE RESPONSES **********
MODAL COMBINATION METHOD 2-GROUPING

P I P E F O R C E S A N D M O M E N T S

ELEMENT NUMBER	ELEMENT TYPE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
1	BEND	END-I	14965.024	15546.861	11302.380	897084.89	214061.66	753875.49
		CENTER	19023.592	10088.488	11302.380	688452.29	460185.42	625900.65
		END-J	15545.669	14966.135	11302.380	300536.37	569535.08	380847.00
2	TANGENT	END-I	15316.157	15587.622	7076.302	300600.57	156975.16	667957.21
		END-J	15316.157	15587.622	7076.302	300600.57	361623.53	491906.09
3	BEND	END-I	15161.856	6046.400	9488.173	300600.57	491906.09	361623.53
		CENTER	14793.272	6908.309	9488.173	472286.08	586630.71	346446.90
		END-J	6046.400	15161.856	9488.173	722916.88	514753.77	151333.05
4	TANGENT	END-I	6343.655	13698.928	4930.293	722916.88	514753.77	151333.05
		END-J	6343.655	13698.928	4930.293	722916.88	620507.03	385360.67
5	TANGENT	END-I	6855.222	11141.894	2739.709	722916.88	620507.03	385360.67
		END-J	6855.222	11141.894	2739.709	722916.88	634562.11	704022.64
6	TANGENT	END-I	7787.849	6205.572	4134.374	722916.88	634562.11	704022.64
		END-J	7787.849	6205.572	4134.374	722916.88	578010.83	809597.36
7	TANGENT	END-I	9146.800	1982.617	8104.673	722916.88	578010.83	809597.36
		END-J	9146.800	1982.617	8104.673	722916.88	452035.35	787454.21
8	TANGENT	END-I	10625.177	8787.608	11414.426	722916.88	452035.35	787454.21
		END-J	10625.177	8787.608	11414.426	722916.88	208204.00	380121.72
9	BEND	END-I	12122.761	12742.450	15893.344	722916.88	380121.72	208204.00
		CENTER	11056.800	13831.076	15893.344	454186.62	449832.12	446799.56
		END-J	12742.450	12122.761	15893.344	170602.80	496199.73	666441.97
10	TANGENT	END-I	14200.158	39997.992	13607.714	170602.80	666441.97	496199.73
		END-J	14200.158	39997.992	13607.714	170602.80	812549.40	2570858.30
11	TANGENT	END-I	16610.469	17212.076	12072.780	170602.80	812549.40	2570858.30
		END-J	16610.469	17212.076	12072.780	170602.80	1517272.89	3741951.24
12	TANGENT	END-I	18578.253	5126.494	11040.405	170602.80	1517272.89	3741951.24
		END-J	18578.253	5126.494	11040.405	170602.80	1711351.68	3684159.29
13	TANGENT	END-I	19685.980	13461.087	10723.947	170602.80	1711351.68	3684159.29
		END-J	19685.980	13461.087	10723.947	170602.80	1869700.73	3477477.29
14	BEND	END-I	17066.401	32059.068	24201.066	1387902.81	419824.20	1085397.62
		CENTER	27957.155	23738.616	24201.066	1051158.81	704299.71	701624.76
		END-J	32058.663	17069.105	24201.066	463022.82	839242.91	453862.66
15	TANGENT	END-I	30836.659	20211.909	14772.143	463122.95	358989.66	898593.37
		END-J	30836.659	20211.909	14772.143	463122.95	678069.23	550023.13
16	BEND	END-I	29850.813	13260.370	9307.263	463122.95	550023.13	678069.23
		CENTER	29948.308	13091.497	9307.263	297148.43	787797.81	676293.04
		END-J	13260.370	29850.813	9307.263	734555.76	683714.42	197623.69
17	TANGENT	END-I	13827.255	26925.042	7524.377	734555.76	683714.42	197623.69
		END-J	13827.255	26925.042	7524.377	734555.76	652147.39	708470.86
18	TANGENT	END-I	14336.285	22319.459	12034.749	734555.76	652147.39	708470.86
		END-J	14336.285	22319.459	12034.749	734555.76	599375.09	1354129.38

19	TANGENT	END-I	15112.428	13566.364	17455.519	734555.76	599375.09	1354129.38
		END-J	15112.428	13566.364	17455.519	734555.76	646626.43	1591932.93
20	TANGENT	END-I	16225.835	5674.269	22960.192	734555.76	646626.43	1591932.93
		END-J	16225.835	5674.269	22960.192	734555.76	843097.20	1601816.54
21	TANGENT	END-I	17574.979	17948.385	27050.271	734555.76	843097.20	1601816.54
		END-J	17574.979	17948.385	27050.271	734555.76	2260440.53	921681.59
22	TANGENT	END-I	18593.401	29532.395	26053.162	734555.76	2260440.53	921681.59
		END-J	18593.401	29532.395	26053.162	734555.76	2676918.16	879640.72
23	TANGENT	END-I	27013.943	52476.737	23502.647	970887.87	3200175.72	3914926.69
		END-J	27013.943	52476.737	23502.647	970887.87	3160487.53	3031489.55
24	TANGENT	END-I	27196.528	58444.918	23902.962	970887.87	3160487.53	3031489.55
		END-J	27196.528	58444.918	23902.962	970887.87	3152523.79	2050355.53
25	BEND	END-I	27848.735	131800.147	67596.901	970887.87	2050355.53	3152523.79
		CENTER	93832.095	96276.115	67596.901	978578.41	824696.68	698453.88
		END-J	131800.147	27848.735	67596.901	582825.10	2617876.26	1870589.84
26	TANGENT	END-I	127281.970	65356.321	25457.808	582825.10	1870589.84	2617876.26
		END-J	127281.970	65356.321	25457.808	582825.10	1804481.45	1076590.70
27	TANGENT	END-I	123022.107	53134.455	20956.120	582825.10	1804481.45	1076590.70
		END-J	123022.107	53134.455	20956.120	582825.10	2125173.36	3312260.95
28	TANGENT	END-I	118718.341	31032.028	12949.879	582825.10	2125173.36	3312260.95
		END-J	118718.341	31032.028	12949.879	582825.10	2455987.09	4716832.64
29	TANGENT	END-I	114286.741	10791.523	9144.835	582825.10	2455987.09	4716832.64
		END-J	114286.741	10791.523	9144.835	582825.10	2473532.44	4838930.20
30	TANGENT	END-I	109735.139	30580.792	14271.758	582825.10	2473532.44	4838930.20
		END-J	109735.139	30580.792	14271.758	582825.10	2096272.91	3816719.18
31	TANGENT	END-I	104969.202	51897.307	20700.827	582825.10	2096272.91	3816719.18
		END-J	104969.202	51897.307	20700.827	582825.10	1753134.99	2955728.80
32	TANGENT	END-I	100084.238	68248.741	26548.101	582825.10	1753134.99	2955728.80
		END-J	100084.238	68248.741	26548.101	582825.10	1589662.63	2577667.20
33	TANGENT	END-I	95391.474	77952.252	30082.544	582825.10	1589662.63	2577667.20
		END-J	95391.474	77952.252	30082.544	582825.10	2086784.40	4556886.56
34	TANGENT	END-I	88254.236	43968.523	28031.491	582825.10	2086784.40	4556886.56
		END-J	88254.236	43968.523	28031.491	582825.10	1534329.08	2453706.74
35	TANGENT	END-I	78263.616	39608.121	20253.008	582825.10	1534329.08	2453706.74
		END-J	78263.616	39608.121	20253.008	582825.10	2793840.66	4121028.65
36	TANGENT	END-I	70629.423	27023.603	11302.954	582825.10	2793840.66	4121028.65
		END-J	70629.423	27023.603	11302.954	582825.10	3192343.28	5076533.80
37	TANGENT	END-I	9913.803	20740.811	17506.042	.00	1280657.47	1463722.68
		END-J	9913.803	20740.811	17506.042	.00	406437.15	429773.00
38	TANGENT	END-I	4118.632	8963.393	8454.440	.00	406437.15	429773.00
		END-J	4118.632	8963.393	8454.440	.00	17556.80	17476.42
39	TANGENT	END-I	618.610	1456.310	1463.026	.00	17556.80	17476.42
		END-J	618.610	1456.310	1463.026	.00	.00	.00
40	TANGENT	END-I	53783.719	20564.282	22220.086	582825.10	2108203.32	3647112.78

		END-J	53783.719	20564.282	22220.086	582825.10	1710327.96	2777229.79
41	TANGENT	END-I	48028.216	29971.980	25356.891	582825.10	1710327.96	2777229.79
		END-J	48028.216	29971.980	25356.891	582825.10	2094824.16	1533116.22
42	TANGENT	END-I	43112.995	36063.915	26245.424	582825.10	2094824.16	1533116.22
		END-J	43112.995	36063.915	26245.424	582825.10	2810055.21	1529466.77
43	TANGENT	END-I	40054.679	37519.229	26309.882	582825.10	2810055.21	1529466.77
		END-J	40054.679	37519.229	26309.882	582825.10	3245472.57	2201166.80
44	BEND	END-I	37228.996	148915.591	40122.346	582825.10	2201166.80	3245472.57
		CENTER	113476.436	103315.859	40122.346	1154559.05	1005178.60	1386034.94
		END-J	148915.591	37228.996	40122.346	1273156.14	1119686.53	2258572.67
45	TANGENT	END-I	141314.325	37482.083	34384.147	1273156.14	2258572.67	1119686.53
		END-J	141314.325	37482.083	34384.147	1273156.14	2607890.85	3649393.25
46	TANGENT	END-I	133775.850	30157.118	29806.547	1273156.14	2607890.85	3649393.25
		END-J	133775.850	30157.118	29806.547	1273156.14	3074552.05	4454233.68
47	TANGENT	END-I	120082.391	15756.561	22470.437	1022255.51	3228695.32	4454233.68
		END-J	120082.391	15756.561	22470.437	1022255.51	3366826.11	4803263.96
48	TANGENT	END-I	9645.164	13349.545	8723.541	.00	314047.57	480584.93
		END-J	9645.164	13349.545	8723.541	.00	.00	.00
49	TANGENT	END-I	111287.955	7141.292	20892.843	1022255.51	3366826.11	4803263.96
		END-J	111287.955	7141.292	20892.843	1022255.51	3434551.39	4943636.73
50	TANGENT	END-I	99627.508	15295.627	19786.613	1022255.51	3434551.39	4943636.73
		END-J	99627.508	15295.627	19786.613	1022255.51	3227191.18	3889229.99
51	TANGENT	END-I	90365.467	25210.679	21580.772	1022255.51	3227191.18	3889229.99
		END-J	90365.467	25210.679	21580.772	1022255.51	3044822.75	3217260.40
52	TANGENT	END-I	73143.500	38043.939	29631.330	762201.05	2754583.44	3217260.40
		END-J	73143.500	38043.939	29631.330	762201.05	2277429.36	2206843.48
53	TANGENT	END-I	8861.627	13126.584	11351.790	.00	408662.96	472553.94
		END-J	8861.627	13126.584	11351.790	.00	.00	.00
54	TANGENT	END-I	64341.000	43954.440	33819.291	762201.05	2277429.36	2206843.48
		END-J	64341.000	43954.440	33819.291	762201.05	2080635.94	924747.20
55	BEND	END-I	54236.532	56986.966	95235.009	762201.05	924747.20	2080635.94
		CENTER	27788.967	73879.579	95235.009	1484289.66	2026363.96	1491075.62
		END-J	56986.966	54236.532	95235.009	3350830.74	2968240.50	2531267.61
56	TANGENT	END-I	52395.981	84474.186	43276.928	3350830.74	2531267.61	2968240.50
		END-J	52395.981	84474.186	43276.928	3350830.74	3675739.48	5728650.05
57	TANGENT	END-I	48636.202	70526.917	32866.399	3350830.74	3675739.48	5728650.05
		END-J	48636.202	70526.917	32866.399	3350830.74	4444398.00	7624160.50
58	TANGENT	END-I	38937.057	17184.236	7573.413	2187013.83	4267634.81	7624160.50
		END-J	38937.057	17184.236	7573.413	2187013.83	4271750.41	8077521.64
59	TANGENT	END-I	18427.284	34987.678	5704.042	.00	205343.57	1259564.12
		END-J	18427.284	34987.678	5704.042	.00	.00	.00
60	TANGENT	END-I	34734.527	6250.055	13515.256	2187013.83	4271750.41	8077521.64
		END-J	34734.527	6250.055	13515.256	2187013.83	3765978.27	7876031.75
61	TANGENT	END-I	30517.555	27060.986	23711.574	2187013.83	3765978.27	7876031.75
		END-J	30517.555	27060.986	23711.574	2187013.83	3150395.86	7154547.97

62	TANGENT	END-I	17329.960	85744.398	44767.479	1174330.16	2785782.49	7154547.97
		END-J	17329.960	85744.398	44767.479	1174330.16	1591456.69	4841892.14
63	TANGENT	END-I	13253.492	39657.445	10624.255	.00	382474.78	1427669.93
		END-J	13253.492	39657.445	10624.255	.00	.00	.00
64	TANGENT	END-I	14639.250	98433.863	49569.553	1174330.16	1591456.69	4841892.14
		END-J	14639.250	98433.863	49569.553	1174330.16	602677.95	2779419.41
65	BEND	END-I	11588.987	53642.846	111803.832	1174330.16	2779419.41	602677.95
		CENTER	41329.916	36167.270	111803.832	985256.50	775939.19	883531.96
		END-J	53642.846	11588.987	111803.832	1275578.48	3653317.32	1317985.95
66	TANGENT	END-I	54628.266	7928.604	6998.020	1275578.48	1317985.95	3653317.32
		END-J	54628.266	7928.604	6998.020	1275578.48	1242299.39	3282565.16
67	TANGENT	END-I	55189.865	12361.365	4645.219	1275578.48	1242299.39	3282565.16
		END-J	55189.865	12361.365	4645.219	1275578.48	1170200.29	3003933.71
68	TANGENT	END-I	55576.562	17324.485	6116.353	1275578.48	1170200.29	3003933.71
		END-J	55576.562	17324.485	6116.353	1275578.48	675196.14	1509496.68
69	TANGENT	END-I	56276.025	26168.756	10922.046	1275578.48	675196.14	1509496.68
		END-J	56276.025	26168.756	10922.046	1275578.48	391229.32	807362.79
70	TANGENT	END-I	56949.324	29834.718	13018.238	1275578.48	391229.32	807362.79
		END-J	56949.324	29834.718	13018.238	1275578.48	1472318.04	3418411.19

********** FINAL RESULTS - SRSS COMBINATION OF DYNAMIC RESPONSES WITH HIGH FREQUENCY MODE RESPONSES **********
MODAL COMBINATION METHOD 2-GROUPING

S U P P O R T F O R C E S A N D M O M E N T S

NODE NUMBER	COMPONENT DIRECTION	FORCE/MOMENT (LOCAL)
1	FX	7577.
1	FY	15677.
1	FZ	17324.
1	MX	1159599.
1	MY	214062.
1	MZ	168702.
10	FX	21095.
10	FY	29467.
14	FX	15649.
14	FY	32124.
14	FZ	23341.
14	MX	1723663.
14	MY	419824.
14	MZ	460417.
25	FX	135551.
26	FY	126022.
26	FZ	34402.
34	FY	103702.
34	FZ	44573.
40	FX	132.
40	FY	131.
40	FZ	86.
44	FY	71739.
44	FZ	162368.
55	FX	58736.
55	FY	101706.
66	FY	116090.
71	FX	13118.
71	FY	29913.
71	FZ	57261.
71	MX	3418411.
71	MY	1672318.
71	MZ	1275578.

BENCHMARK PROBLEM 2

DIRECT INTEGRATION TIME HISTORY ANALYSIS

SYSTEM 80+ FEEDWATER PIPING,BENCHMARK PROBLEM 2,DIRECT INTEGRATION TIME HISTORY ANALYSIS

C O N T R O L I N F O R M A T I O N

```
NUMBER OF NODAL POINTS              =   71
NUMBER OF ELEMENT TYPES             =    2
NUMBER OF STATIC LOAD CASES         =    0
NUMBER OF DYNAMIC LOAD CASES        =    1
NUMBER OF ANCHOR MVMT CASES         =    0
NUMBER OF FREQUENCIES               =    0
SOLUTION MODE (MODEX)               =    0
  EQ.0,  EXECUTION
  EQ.1,  DATA CHECK
STRESS CALCULATION FLAG             =    0
   EQ.0 NO
   EQ.1 YES
ASME CODE EVALUATION FLAG           =    0
   EQ.1  CLASS 1 PIPING
   EQ.2  CLASS2 OR CLASS 3 PIPING
ACCELERATION DUE TO GRAVITY        =386.4
BANDWIDTH MINIMIZATION FLAG         =    0
   EQ.0  NO
   EQ.1  YES
ARBITRARY NODE NUMBERING FLAG       =    1
   EQ.0  NO
   EQ.1  YES
NUMBER OF SUPPORT GROUPS            =    0
FLAG FOR NODAL COORD. INPUT UNITS=       0
   EQ.0  CONSISTENT UNIT
   EQ.1  FEET TO INCHES
```

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LIST OF ANALYSIS TO BE PERFORMED
LOAD CASE     DISK FILE     ANALYSIS TYPE

    1             0         TIME HISTORY ANALYSIS
```

GENERATED NODAL DATA

NODE NUMBER	BOUNDARY CONDITION CODES X	Y	Z	XX	YY	ZZ	NODAL POINT COORDINATES X	Y	Z	T
1	0	0	0	0	0	0	82.724	1427.250	-82.724	570.000
2	0	0	0	0	0	0	103.940	1397.250	-103.940	570.000
3	0	0	0	0	0	0	103.940	1338.000	-103.940	570.000
4	0	0	0	0	0	0	133.940	1308.000	-103.940	570.000
5	0	0	0	0	0	0	163.940	1308.000	-103.940	570.000
6	0	0	0	0	0	0	193.940	1308.000	-103.940	570.000
7	0	0	0	0	0	0	211.940	1308.000	-103.940	570.000
8	0	0	0	0	0	0	229.940	1308.000	-103.940	570.000
9	0	0	0	0	0	0	278.000	1308.000	-73.940	570.000
10	0	0	0	0	0	0	308.000	1308.000	-3.500	570.000
11	0	0	0	0	0	0	308.000	1308.000	66.940	570.000
12	0	0	0	0	0	0	308.000	1308.000	86.928	570.000
13	0	0	0	0	0	0	82.724	1427.250	82.724	570.000
14	0	0	0	0	0	0	103.940	1397.250	103.940	570.000
15	0	0	0	0	0	0	103.940	1338.000	103.940	570.000
16	0	0	0	0	0	0	133.940	1308.000	103.940	570.000
17	0	0	0	0	0	0	163.940	1308.000	103.940	570.000
18	0	0	0	0	0	0	193.940	1308.000	103.940	570.000
19	0	0	0	0	0	0	211.940	1308.000	103.940	570.000
20	0	0	0	0	0	0	229.940	1308.000	103.940	570.000
21	0	0	0	0	0	0	290.996	1308.000	103.940	570.000
22	0	0	0	0	0	0	308.000	1308.000	103.940	570.000
23	0	0	0	0	0	0	308.000	1308.000	120.940	570.000
24	0	0	0	0	0	0	308.000	1308.000	138.000	570.000
25	0	0	0	0	0	0	344.000	1308.000	174.000	570.000
26	0	0	0	0	0	0	393.000	1308.000	174.000	570.000
27	0	0	0	0	0	0	440.000	1308.000	174.000	570.000
28	0	0	0	0	0	0	487.000	1308.000	174.000	570.000
29	0	0	0	0	0	0	534.000	1308.000	174.000	570.000
30	0	0	0	0	0	0	581.000	1308.000	174.000	570.000
31	0	0	0	0	0	0	608.000	1308.000	174.000	570.000
32	0	0	0	0	0	0	635.000	1308.000	174.000	570.000
33	0	0	0	0	0	0	680.000	1308.000	174.000	570.000
34	0	0	0	0	0	0	776.000	1308.000	174.000	570.000
35	0	0	0	0	0	0	872.000	1308.000	174.000	570.000
36	0	0	0	0	0	0	920.444	1308.000	174.000	570.000
37	0	0	0	0	0	0	870.444	1308.000	174.000	570.000
38	0	0	0	0	0	0	824.444	1308.000	174.000	570.000
39	0	0	0	0	0	0	812.444	1308.000	174.000	570.000
40	0	0	0	0	0	0	980.000	1308.000	174.000	570.000
41	0	0	0	0	0	0	1040.000	1308.000	174.000	570.000
42	0	0	0	0	0	0	1088.000	1308.000	174.000	570.000
43	0	0	0	0	0	0	1112.000	1308.000	174.000	570.000
44	0	0	0	0	0	0	1148.000	1308.000	138.000	570.000
45	0	0	0	0	0	0	1148.000	1308.000	69.000	570.000
46	0	0	0	0	0	0	1148.000	1308.000	42.000	570.000
47	0	0	0	0	0	0	1148.000	1308.000	15.000	570.000
48	0	0	0	0	0	0	1184.000	1308.000	42.000	570.000
49	0	0	0	0	0	0	1148.000	1308.000	-57.000	570.000
50	0	0	0	0	0	0	1148.000	1308.000	-129.000	570.000
51	0	0	0	0	0	0	1148.000	1308.000	-156.000	570.000
52	0	0	0	0	0	0	1148.000	1308.000	-183.000	570.000
53	0	0	0	0	0	0	1184.000	1308.000	-156.000	570.000
54	0	0	0	0	0	0	1148.000	1308.000	-252.000	570.000
55	0	0	0	0	0	0	1184.000	1308.000	-288.000	570.000
56	0	0	0	0	0	0	1217.000	1308.000	-288.000	570.000
57	0	0	0	0	0	0	1244.000	1308.000	-288.000	570.000
58	0	0	0	0	0	0	1271.000	1308.000	-288.000	570.000
59	0	0	0	0	0	0	1244.000	1308.000	-252.000	570.000
60	0	0	0	0	0	0	1313.000	1308.000	-288.000	570.000
61	0	0	0	0	0	0	1340.000	1308.000	-288.000	570.000
62	0	0	0	0	0	0				

63	0	0	0	0	0	0	1367.000	1308.000	-288.000	570.000
64	0	0	0	0	0	0	1340.000	1308.000	-252.000	570.000
65	0	0	0	0	0	0	1388.000	1308.000	-288.000	570.000
66	0	0	0	0	0	0	1424.000	1308.000	-324.000	570.000
67	0	0	0	0	0	0	1424.000	1308.000	-408.000	570.000
68	0	0	0	0	0	0	1424.000	1308.000	-432.000	570.000
69	0	0	0	0	0	0	1424.000	1308.000	-520.000	570.000
70	0	0	0	0	0	0	1424.000	1308.000	-608.000	570.000
71	0	0	0	0	0	0	1424.000	1308.000	-696.000	570.000

S P R I N G E L E M E N T S

ELEMENT TYPE = 1
NUMBER OF ELEMENTS = 33

ELEMENT LOAD CASE MULTIPLIERS

CASE(A)	CASE(B)	CASE(C)	CASE(D)
1.0000	1.0000	1.0000	1.0000

ELEMENT NUMBER	NODE (N)	SUPPORT GROUP	CODE KD	CODE KR	DIRECTION COSINES WRT GLOBAL AXES X-	Y-	Z-	SPECIFIED DISPLACEMENT	SPECIFIED ROTATION	SPRING RATE
1	1	1	1	0	1.000	.000	.000	.000	.000	1.0000E+13
2	1	1	1	0	.000	1.000	.000	.000	.000	1.0000E+13
3	1	1	1	0	.000	.000	1.000	.000	.000	1.0000E+13
4	1	1	0	1	1.000	.000	.000	.000	.000	1.0000E+15
5	1	1	0	1	.000	1.000	.000	.000	.000	1.0000E+15
6	1	1	0	1	.000	.000	1.000	.000	.000	1.0000E+15
7	10	1	1	0	1.000	.000	.000	.000	.000	1.0000E+13
8	10	1	1	0	.000	1.000	.000	.000	.000	1.0000E+13
9	14	1	1	0	1.000	.000	.000	.000	.000	1.0000E+13
10	14	1	1	0	.000	1.000	.000	.000	.000	1.0000E+13
11	14	1	1	0	.000	.000	1.000	.000	.000	1.0000E+13
12	14	1	0	1	1.000	.000	.000	.000	.000	1.0000E+15
13	14	1	0	1	.000	1.000	.000	.000	.000	1.0000E+15
14	14	1	0	1	.000	.000	1.000	.000	.000	1.0000E+15
15	25	1	1	0	1.000	.000	.000	.000	.000	1.0000E+13
16	26	1	1	0	.000	1.000	.000	.000	.000	1.0000E+13
17	26	1	1	0	.000	.000	1.000	.000	.000	1.0000E+13
18	34	1	1	0	.000	1.000	.000	.000	.000	1.0000E+13
19	34	1	1	0	.000	.000	1.000	.000	.000	1.0000E+13
20	40	1	1	0	1.000	.000	.000	.000	.000	1.1250E+03
21	40	1	1	0	.000	1.000	.000	.000	.000	2.6500E+02
22	40	1	1	0	.000	.000	1.000	.000	.000	2.6500E+02
23	44	1	1	0	.000	1.000	.000	.000	.000	1.0000E+13
24	44	1	1	0	.000	.000	1.000	.000	.000	1.0000E+13
25	55	1	1	0	1.000	.000	.000	.000	.000	1.0000E+13
26	55	1	1	0	.000	1.000	.000	.000	.000	1.0000E+13
27	66	1	1	0	.000	1.000	.000	.000	.000	1.0000E+13
28	71	1	1	0	1.000	.000	.000	.000	.000	1.0000E+13
29	71	1	1	0	.000	1.000	.000	.000	.000	1.0000E+13
30	71	1	1	0	.000	.000	1.000	.000	.000	1.0000E+13
31	71	1	0	1	1.000	.000	.000	.000	.000	1.0000E+15
32	71	1	0	1	.000	1.000	.000	.000	.000	1.0000E+15
33	71	1	0	1	.000	.000	1.000	.000	.000	1.0000E+15

P I P E E L E M E N T I N P U T D A T A

C O N T R O L I N F O R M A T I O N

NUMBER OF PIPE ELEMENTS	=	70
NUMBER OF MATERIAL SETS	=	1
MAXIMUM NUMBER OF MATERIAL TEMPERATURE INPUT POINTS	=	2
NUMBER OF SECTION PROPERTY SETS	=	14
NUMBER OF BRANCH POINT NODES	=	2
MAXIMUM NUMBER OF TANGENTS COMMON TO A BRANCH POINT	=	3
FLAG FOR NEGLECTING AXIAL DEFORMATIONS IN BEND ELEMENTS (EQ.1, NEGLECT)	=	0

M A T E R I A L P R O P E R T Y T A B L E S

MATERIAL NUMBER = (1)
NUMBER OF
TEMPERATURE POINTS = (2)
IDENTIFICATION = ('SA106 B

POINT NUMBER	TEMPERATURE	YOUNG'S MODULUS	POISSON'S RATIO	THERMAL EXPANSION
1	70.00	2.950E+07	.300	5.600E-06
2	651.00	2.610E+07	.300	8.700E-06

S E C T I O N P R O P E R T Y T A B L E

SECTION NUMBER	OUTSIDE DIAMETER	WALL THICKNESS	SHAPE FACTOR FOR SHEAR	WEIGHT/ UNIT LENGTH	MASS/ UNIT LENGTH	D E S C R I P T I O N
1	20.000	1.0310	.0000	.2898E+02	.7499E-01	20S80
2	24.000	1.2180	.0000	.4075E+02	.1055E+00	24S80
3	24.000	1.8120	.0000	.5043E+02	.1305E+00	24S120
4	28.000	2.0000	.0000	.3169E+02	.8202E-01	28SPEC
5	33.000	1.5000	.0000	.4205E+02	.1088E+00	30ID
6	22.062	2.0620	.0000	.8333E+02	.2157E+00	20S80 VLVE
7	26.436	2.4360	.0000	.7407E+02	.1917E+00	24S80 vlve
8	27.624	3.6240	.0000	.7407E+02	.1917E+00	24S120 VLVE
9	27.600	10.0000	.0000	.0000E+00	.0000E+00	VLOP
10	22.000	1.1240	.0000	.4075E+02	.1055E+00	BRED 24*20
11	26.000	1.9060	.0000	.3737E+01	.9671E-02	BRED 28*24

B R A N C H P O I N T N O D E L I S T

BRANCH POINT	NODE NUMBER
1	23

E L E M E N T L O A D C A S E M U L T I P L I E R S

	CASE A	CASE B	CASE C	CASE D
X-DIRECTION GRAVITY	.000	.000	.000	.000
Y-DIRECTION GRAVITY	-1.000	.000	.000	.000
Z-DIRECTION GRAVITY	.000	.000	.000	.000
THERMAL DISTORTION	.000	.000	1.000	.000
PRESSURE DISTORTION	.000	1.000	.000	.000

PIPE ELEMENT INPUT DATA

ELEMENT NUMBER	ELEMENT TYPE		NODE -I	NODE -J	MATL. NUMBER	SECTION NUMBER	REFERENCE TEMPERATURE (BEND RADIUS)	INTERNAL PRESSURE (THIRD POINT)	DIRECTION COSINES A(YX) (X3-ORDINATE)	A(YY) (Y3-ORDINATE)	A(YZ) (Z3-ORDINATE)	NODE INCREMENT (WALL FRACTION)	INPUT TAG BAND	
													IC	
1	BEND		1	2	1	1	70.00	.00						
							(30.000)	( ) (	103.940) (	1427.250) (	-103.940) (	.1000)		12
2	TANG	T	2	3	1	1	70.00	.00	.0000	.0000	.0000	1	II	12
3	BEND		3	4	1	1	70.00	.00					IC	
							(30.000)	( ) (	103.940) (	1308.000) (	-103.940) (	.1000)		12
4	TANG	T	4	5	1	1	70.00	.00	.0000	.0000	.0000	1	II	12
5	TANG	T	5	6	1	1	70.00	.00	.0000	.0000	.0000	1	II	12
6	TANG	T	6	7	1	6	70.00	.00	.0000	.0000	.0000	1	II	12
7	TANG	T	7	8	1	6	70.00	.00	.0000	.0000	.0000	1	II	12
8	TANG	T	8	9	1	1	70.00	.00	.0000	.0000	.0000	1	II	12
9	BEND		9	10	1	1	70.00	.00					IC	
							(30.000)	( ) (	308.000) (	1308.000) (	-103.940) (	.1000)		12
10	TANG	T	10	11	1	1	70.00	.00	.0000	.0000	.0000	1	II	12
11	TANG	T	11	12	1	1	70.00	.00	.0000	.0000	.0000	1	II	12
12	TANG	T	12	13	1	10	70.00	.00	.0000	.0000	.0000	1	II	12
13	TANG	T	13	23	1	2	70.00	.00	.0000	.0000	.0000	1	II	66
14	BEND		14	15	1	1	70.00	.00					IC	
							(30.000)	( ) (	103.940) (	1427.250) (	103.940) (	.1000)		12
15	TANG	T	15	16	1	1	70.00	.00	.0000	.0000	.0000	1	II	12
16	BEND		16	17	1	1	70.00	.00					IC	
							(30.000)	( ) (	103.940) (	1308.000) (	103.940) (	.1000)		12
17	TANG	T	17	18	1	1	70.00	.00	.0000	.0000	.0000	1	II	12
18	TANG	T	18	19	1	1	70.00	.00	.0000	.0000	.0000	1	II	12
19	TANG	T	19	20	1	6	70.00	.00	.0000	.0000	.0000	1	II	12
20	TANG	T	20	21	1	6	70.00	.00	.0000	.0000	.0000	1	II	12
21	TANG	T	21	22	1	1	70.00	.00	.0000	.0000	.0000	1	II	12
22	TANG	T	22	23	1	1	70.00	.00	.0000	.0000	.0000	1	II	12
23	TANG	T	23	24	1	2	70.00	.00	.0000	.0000	.0000	1	II	12
24	TANG	T	24	25	1	2	70.00	.00	.0000	.0000	.0000	1	II	12
25	BEND		25	26	1	2	70.00	.00					IC	
							(36.000)	( ) (	308.000) (	1308.000) (	174.000) (	.1000)		12
26	TANG	T	26	27	1	2	70.00	.00	.0000	.0000	.0000	1	II	12
27	TANG	T	27	28	1	2	70.00	.00	.0000	.0000	.0000	1	II	12
28	TANG	T	28	29	1	2	70.00	.00	.0000	.0000	.0000	1	II	12
29	TANG	T	29	30	1	2	70.00	.00	.0000	.0000	.0000	1	II	12
30	TANG	T	30	31	1	2	70.00	.00	.0000	.0000	.0000	1	II	12
31	TANG	T	31	32	1	7	70.00	.00	.0000	.0000	.0000	1	II	12
32	TANG	T	32	33	1	7	70.00	.00	.0000	.0000	.0000	1	II	12
33	TANG	T	33	34	1	2	70.00	.00	.0000	.0000	.0000	1	II	12
34	TANG	T	34	35	1	2	70.00	.00	.0000	.0000	.0000	1	II	12
35	TANG	T	35	36	1	2	70.00	.00	.0000	.0000	.0000	1	II	12
36	TANG	T	36	37	1	2	70.00	.00	.0000	.0000	.0000	1	II	12
37	TANG	T	37	38	1	5	70.00	.00	.0000	.0000	.0000	1	II	12
38	TANG	T	38	39	1	5	70.00	.00	.0000	.0000	.0000	1	II	12

P I P E E L E M E N T I N P U T D A T A

ELEMENT NUMBER	ELEMENT TYPE	NODE -I	NODE -J	MATL. NUMBER	SECTION NUMBER	REFERENCE TEMPERATURE (BEND RADIUS)	INTERNAL PRESSURE (THIRD POINT)	DIRECTION COSINES A(YX) (X3-ORDINATE)	A(YY) (Y3-ORDINATE)	A(YZ) (Z3-ORDINATE)	NODE INCREMENT (WALL FRACTION)	INPUT TAG BAND	
39	TANG T	39	40	1	5	70.00	.00	.0000	.0000	.0000	1	II	12
40	TANG T	37	41	1	2	70.00	.00	.0000	.0000	.0000	1	II	30
41	TANG T	41	42	1	2	70.00	.00	.0000	.0000	.0000	1	II	12
42	TANG T	42	43	1	2	70.00	.00	.0000	.0000	.0000	1	II	12
43	TANG T	43	44	1	2	70.00	.00	.0000	.0000	.0000	1	II	12
44	BEND	44	45	1	2	70.00	.00					IC	
						(36.000)	( )	(1148.000)	(1308.000)	(174.000)	(.1000)		12
45	TANG T	45	46	1	2	70.00	.00	.0000	.0000	.0000	1	II	12
46	TANG T	46	47	1	8	70.00	.00	.0000	.0000	.0000	1	II	12
47	TANG T	47	48	1	8	70.00	.00	.0000	.0000	.0000	1	II	12
48	TANG T	47	49	1	9	70.00	.00	.0000	.0000	.0000	1	II	18
49	TANG T	48	50	1	3	70.00	.00	.0000	.0000	.0000	1	II	18
50	TANG T	50	51	1	3	70.00	.00	.0000	.0000	.0000	1	II	12
51	TANG T	51	52	1	8	70.00	.00	.0000	.0000	.0000	1	II	12
52	TANG T	52	53	1	8	70.00	.00	.0000	.0000	.0000	1	II	12
53	TANG T	52	54	1	9	70.00	.00	.0000	.0000	.0000	1	II	18
54	TANG T	53	55	1	3	70.00	.00	.0000	.0000	.0000	1	II	18
55	BEND	55	56	1	3	70.00	.00					IC	
						(36.000)	( )	(1148.000)	(1308.000)	(-288.000)	(.1000)		12
56	TANG T	56	57	1	3	70.00	.00	.0000	.0000	.0000	1	II	12
57	TANG T	57	58	1	8	70.00	.00	.0000	.0000	.0000	1	II	12
58	TANG T	58	59	1	8	70.00	.00	.0000	.0000	.0000	1	II	12
59	TANG T	58	60	1	9	70.00	.00	.0000	.0000	.0000	1	II	18
60	TANG T	59	61	1	3	70.00	.00	.0000	.0000	.0000	1	II	18
61	TANG T	61	62	1	8	70.00	.00	.0000	.0000	.0000	1	II	12
62	TANG T	62	63	1	8	70.00	.00	.0000	.0000	.0000	1	II	12
63	TANG T	62	64	1	9	70.00	.00	.0000	.0000	.0000	1	II	18
64	TANG T	63	65	1	3	70.00	.00	.0000	.0000	.0000	1	II	18
65	BEND	65	66	1	3	70.00	.00					IC	
						(36.000)	( )	(1424.000)	(1308.000)	(-288.000)	(.1000)		12
66	TANG T	66	67	1	3	70.00	.00	.0000	.0000	.0000	1	II	12
67	TANG T	67	68	1	11	70.00	.00	.0000	.0000	.0000	1	II	12
68	TANG T	68	69	1	4	70.00	.00	.0000	.0000	.0000	1	II	12
69	TANG T	69	70	1	4	70.00	.00	.0000	.0000	.0000	1	II	12
70	TANG T	70	71	1	4	70.00	.00	.0000	.0000	.0000	1	II	12

N O D A L L O A D S (S T A T I C) O R M A S S E S (D Y N A M I C)

NODE NUMBER	LOAD CASE	X-AXIS FORCE	Y-AXIS FORCE	Z-AXIS FORCE	X-AXIS MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
49	0	7.76398E+00	7.76398E+00	7.76398E+00	0.00000E+00	0.00000E+00	0.00000E+00
49	1	0.00000E+00	-3.00000E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
54	0	7.76398E+00	7.76398E+00	7.76398E+00	0.00000E+00	0.00000E+00	0.00000E+00
54	1	0.00000E+00	-3.00000E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
60	0	7.76398E+00	7.76398E+00	7.76398E+00	0.00000E+00	0.00000E+00	0.00000E+00
60	1	0.00000E+00	-3.00000E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
64	0	7.76398E+00	7.76398E+00	7.76398E+00	0.00000E+00	0.00000E+00	0.00000E+00
64	1	0.00000E+00	-3.00000E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

ALL EQUATIONS HAVE STIFFNESS ATTACHED

STRUCTURE LOAD CASE	ELEMENT LOAD MULTIPLIERS A	B	C	D
1	.000	.000	.000	.000

S T E P - B Y - S T E P S O L U T I O N C O N T R O L I N F O R M A T I O N

NUMBER OF TIME VARYING FUNCTIONS = 11

GROUND MOTION INDICATOR = 0
EQ.0, NONE
GT.0, READ ACCELERATION INPUT

NUMBER OF ARRIVAL TIMES = 0
EQ.0, ALL FUNCTIONS ARRIVE
AT TIME ZERO

NUMBER OF SOLUTION TIME STEPS = 4000

OUTPUT (PRINT) INTERVAL = 1

SOLUTION TIME INCREMENT = .1000E-02

MASS- PROPORTIONAL DAMPING
COEFFICIENT (ALPHA) = .3770E-04

STIFFNESS-PROPORTIONAL DAMPING
COEFFICIENT (BETA) = .9549E-04

STIFFNESS MATRIX PARAMETERS

MINIMUM NON-ZERO DIAGONAL ELEMENT = 2.873E+06
MAXIMUM DIAGONAL ELEMENT = 1.000E+15
MAXIMUN/MINIMUM = 3.481E+08
AVERAGE DIAGONAL ELEMENT = 2.163E+13
DENSITY OF THE MATRIX = 5.3 PCT.

D Y N A M I C L O A D I N P U T

NODE NUMBER	DEGREE OF FREEDOM	FUNCTION REFERENCE	ARRIVAL TIME NUMBER	FUNCTION MULTIPLIER
1	1	1	1	.7070E+00
1	3	1	1	-.7070E+00
3	2	2	1	-.1000E+01
9	1	3	1	.1000E+01
14	1	9	1	.7070E+00
14	3	9	1	.7070E+00
16	2	10	1	-.1000E+01
17	1	11	1	.1000E+01
25	3	4	1	.1000E+01
44	1	5	1	.1000E+01
55	3	6	1	-.1000E+01
65	1	7	1	.1000E+01
66	3	8	1	-.1000E+01

REQUIRED BLANK COMMON FOR THIS STEP= 9374

A R R I V A L T I M E V A L U E S

INPUT ORDER	ARRIVAL TIME VALUE

T I M E F U N C T I O N D A T A

801 1.0 FUNCTION 1

0.000	0.000	0.005	0.045	0.010	0.045
0.015	0.045	0.020	0.045	0.025	0.044
0.030	0.044	0.035	0.043	0.040	0.043
0.045	0.042	0.050	0.041	0.055	0.040
0.060	0.039	0.065	0.038	0.070	0.037
0.075	0.035	0.080	0.034	0.085	0.033
0.090	0.032	0.095	0.031	0.100	0.029
0.105	0.028	0.110	0.027	0.115	0.025
0.120	0.024	0.125	0.023	0.130	0.021
0.135	0.020	0.140	0.018	0.145	0.017
0.150	0.015	0.155	0.014	0.160	0.012
0.165	0.011	0.170	0.009	0.175	0.008
0.180	0.006	0.185	0.004	0.190	0.003
0.195	0.001	0.200	-0.001	0.205	-0.003
0.210	-0.004	0.215	-0.006	0.220	-0.008
0.225	-0.010	0.230	-0.012	0.235	-0.013

0.240	-0.015	0.245	-0.017	0.250	-0.019
0.255	-0.021	0.260	-0.023	0.265	-0.025
0.270	-0.027	0.275	-0.029	0.280	-0.031
0.285	-0.032	0.290	-0.034	0.295	-0.036
0.300	-0.038	0.305	-0.040	0.310	-0.042
0.315	-0.044	0.320	-0.046	0.325	-0.048
0.330	-0.050	0.335	-0.052	0.340	-0.054
0.345	-0.056	0.350	-0.058	0.355	-0.060
0.360	-0.063	0.365	-0.065	0.370	-0.067
0.375	-0.069	0.380	-0.071	0.385	-0.073
0.390	-0.076	0.395	-0.078	0.400	-0.080
0.405	-0.082	0.410	-0.085	0.415	-0.087
0.420	-0.089	0.425	-0.092	0.430	-0.094
0.435	-0.096	0.440	-0.099	0.445	-0.101
0.450	-0.104	0.455	-0.106	0.460	-0.109
0.465	-0.111	0.470	-0.113	0.475	-0.116
0.480	-0.118	0.485	-0.121	0.490	-0.123
0.495	-0.126	0.500	-0.128	0.505	-0.131
0.510	-0.133	0.515	-0.135	0.520	-0.138
0.525	-0.140	0.530	-0.143	0.535	-0.145
0.540	-0.148	0.545	-0.150	0.550	-0.153
0.555	-0.155	0.560	-0.158	0.565	-0.161
0.570	-0.163	0.575	-0.166	0.580	-0.168
0.585	-0.171	0.590	-0.173	0.595	-0.176
0.600	-0.179	0.605	-0.181	0.610	-0.184
0.615	-0.187	0.620	-0.190	0.625	-0.192
0.630	-0.195	0.635	-0.198	0.640	-0.201
0.645	-0.203	0.650	-0.206	0.655	-0.209
0.660	-0.212	0.665	-0.215	0.670	-0.218
0.675	-0.221	0.680	-0.224	0.685	-0.227
0.690	-0.230	0.695	-0.233	0.700	-0.236
0.705	-0.239	0.710	-0.242	0.715	-0.245
0.720	-0.248	0.725	-0.252	0.730	-0.255
0.735	-0.258	0.740	-0.261	0.745	-0.265
0.750	-0.268	0.755	-0.272	0.760	-0.275
0.765	-0.279	0.770	-0.282	0.775	-0.286
0.780	-0.289	0.785	-0.293	0.790	-0.297
0.795	-0.300	0.800	-0.304	0.805	-0.308
0.810	-0.312	0.815	-0.316	0.820	-0.320
0.825	-0.324	0.830	-0.328	0.835	-0.332
0.840	-0.336	0.845	-0.340	0.850	-0.344
0.855	-0.348	0.860	-0.352	0.865	-0.357
0.870	-0.361	0.875	-0.365	0.880	-0.370
0.885	-0.374	0.890	-0.379	0.895	-0.383
0.900	-0.388	0.905	-0.393	0.910	-0.397
0.915	-0.402	0.920	-0.407	0.925	-0.412
0.930	-0.416	0.935	-0.421	0.940	-0.426
0.945	-0.431	0.950	-0.436	0.955	-0.442
0.960	-0.447	0.965	-0.452	0.970	-0.457
0.975	-0.463	0.980	-0.468	0.985	-0.473
0.990	-0.479	0.995	-0.484	1.000	-0.490
1.005	-0.496	1.010	-0.501	1.015	-0.507
1.020	-0.513	1.025	-0.519	1.030	-0.525
1.035	-0.531	1.040	-0.537	1.045	-0.543
1.050	-0.549	1.055	-0.556	1.060	-0.562
1.065	-0.568	1.070	-0.575	1.075	-0.582
1.080	-0.588	1.085	-0.595	1.090	-0.602
1.095	-0.608	1.100	-0.615	1.105	-0.622
1.110	-0.629	1.115	-0.636	1.120	-0.644
1.125	-0.651	1.130	-0.658	1.135	-0.666
1.140	-0.673	1.145	-0.681	1.150	-0.688
1.155	-0.696	1.160	-0.704	1.165	-0.712
1.170	-0.720	1.175	-0.728	1.180	-0.736
1.185	-0.744	1.190	-0.753	1.195	-0.761
1.200	-0.770	1.205	-0.778	1.210	-0.787
1.215	-0.796	1.220	-0.805	1.225	-0.814

1.230	-0.823	1.235	-0.832	1.240	-0.841
1.245	-0.851	1.250	-0.860	1.255	-0.870
1.260	-0.880	1.265	-0.889	1.270	-0.899
1.275	-0.909	1.280	-0.920	1.285	-0.930
1.290	-0.940	1.295	-0.951	1.300	-0.961
1.305	-0.972	1.310	-0.983	1.315	-0.994
1.320	-1.005	1.325	-1.016	1.330	-1.028
1.335	-1.039	1.340	-1.051	1.345	-1.062
1.350	-1.074	1.355	-1.086	1.360	-1.099
1.365	-1.111	1.370	-1.123	1.375	-1.136
1.380	-1.149	1.385	-1.162	1.390	-1.175
1.395	-1.188	1.400	-1.201	1.405	-1.215
1.410	-1.229	1.415	-1.243	1.420	-1.257
1.425	-1.271	1.430	-1.285	1.435	-1.300
1.440	-1.315	1.445	-1.329	1.450	-1.345
1.455	-1.360	1.460	-1.375	1.465	-1.391
1.470	-1.407	1.475	-1.423	1.480	-1.439
1.485	-1.456	1.490	-1.473	1.495	-1.490
1.500	-1.507	1.505	-1.524	1.510	-1.542
1.515	-1.560	1.520	-1.578	1.525	-1.596
1.530	-1.615	1.535	-1.633	1.540	-1.653
1.545	-1.672	1.550	-1.691	1.555	-1.711
1.560	-1.731	1.565	-1.752	1.570	-1.772
1.575	-1.793	1.580	-1.814	1.585	-1.836
1.590	-1.858	1.595	-1.880	1.600	-1.902
1.605	-1.925	1.610	-1.948	1.615	-1.971
1.620	-1.995	1.625	-2.019	1.630	-2.043
1.635	-2.068	1.640	-2.093	1.645	-2.118
1.650	-2.144	1.655	-2.170	1.660	-2.197
1.665	-2.224	1.670	-2.251	1.675	-2.279
1.680	-2.307	1.685	-2.335	1.690	-2.364
1.695	-2.393	1.700	-2.423	1.705	-2.453
1.710	-2.484	1.715	-2.515	1.720	-2.546
1.725	-2.578	1.730	-2.611	1.735	-2.644
1.740	-2.677	1.745	-2.711	1.750	-2.746
1.755	-2.781	1.760	-2.817	1.765	-2.853
1.770	-2.889	1.775	-2.927	1.780	-2.965
1.785	-3.003	1.790	-3.042	1.795	-3.082
1.800	-3.122	1.805	-3.163	1.810	-3.204
1.815	-3.247	1.820	-3.290	1.825	-3.333
1.830	-3.378	1.835	-3.423	1.840	-3.468
1.845	-3.515	1.850	-3.562	1.855	-3.610
1.860	-3.659	1.865	-3.709	1.870	-3.759
1.875	-3.810	1.880	-3.862	1.885	-3.916
1.890	-3.969	1.895	-4.024	1.900	-4.080
1.905	-4.137	1.910	-4.194	1.915	-4.253
1.920	-4.313	1.925	-4.373	1.930	-4.435
1.935	-4.498	1.940	-4.562	1.945	-4.627
1.950	-4.693	1.955	-4.760	1.960	-4.829
1.965	-4.899	1.970	-4.970	1.975	-5.042
1.980	-5.116	1.985	-5.190	1.990	-5.267
1.995	-5.344	2.000	-5.423	2.005	-5.504
2.010	-5.586	2.015	-5.669	2.020	-5.754
2.025	-5.841	2.030	-5.929	2.035	-6.019
2.040	-6.110	2.045	-6.204	2.050	-6.299
2.055	-6.395	2.060	-6.494	2.065	-6.595
2.070	-6.697	2.075	-6.801	2.080	-6.908
2.085	-7.016	2.090	-7.127	2.095	-7.240
2.100	-7.355	2.105	-7.472	2.110	-7.592
2.115	-7.714	2.120	-7.838	2.125	-7.965
2.130	-8.094	2.135	-8.226	2.140	-8.361
2.145	-8.498	2.150	-8.638	2.155	-8.782
2.160	-8.928	2.165	-9.077	2.170	-9.229
2.175	-9.384	2.180	-9.542	2.185	-9.704
2.190	-9.870	2.195	-10.038	2.200	-10.210
2.205	-10.386	2.210	-10.566	2.215	-10.750

2.220	-10.937	2.225	-11.129	2.230	-11.324
2.235	-11.524	2.240	-11.729	2.245	-11.937
2.250	-12.151	2.255	-12.369	2.260	-12.592
2.265	-12.820	2.270	-13.053	2.275	-13.291
2.280	-13.535	2.285	-13.784	2.290	-14.038
2.295	-14.299	2.300	-14.565	2.305	-14.838
2.310	-15.117	2.315	-15.402	2.320	-15.694
2.325	-15.993	2.330	-16.299	2.335	-16.612
2.340	-16.933	2.345	-17.261	2.350	-17.596
2.355	-17.940	2.360	-18.292	2.365	-18.653
2.370	-19.022	2.375	-19.400	2.380	-19.788
2.385	-20.185	2.390	-20.591	2.395	-21.008
2.400	-21.435	2.405	-21.872	2.410	-22.320
2.415	-22.780	2.420	-23.251	2.425	-23.734
2.430	-24.229	2.435	-24.737	2.440	-25.257
2.445	-25.791	2.450	-26.339	2.455	-26.900
2.460	-27.477	2.465	-28.068	2.470	-28.674
2.475	-29.296	2.480	-29.935	2.485	-30.590
2.490	-31.262	2.495	-31.953	2.500	-32.661
2.505	-33.388	2.510	-34.135	2.515	-34.902
2.520	-35.689	2.525	-36.498	2.530	-37.328
2.535	-38.181	2.540	-39.057	2.545	-39.957
2.550	-40.881	2.555	-41.831	2.560	-42.807
2.565	-43.809	2.570	-44.840	2.575	-45.899
2.580	-46.987	2.585	-48.105	2.590	-49.255
2.595	-50.436	2.600	-51.651	2.605	-52.900
2.610	-54.184	2.615	-55.504	2.620	-56.861
2.625	-58.256	2.630	-59.691	2.635	-61.166
2.640	-62.683	2.645	-64.243	2.650	-65.848
2.655	-67.498	2.660	-69.195	2.665	-70.940
2.670	-72.734	2.675	-74.580	2.680	-76.478
2.685	-78.431	2.690	-80.438	2.695	-82.503
2.700	-84.626	2.705	-86.810	2.710	-89.055
2.715	-91.364	2.720	-93.738	2.725	-96.179
2.730	-98.689	2.735	-101.270	2.740	-103.920
2.745	-106.650	2.750	-109.450	2.755	-112.330
2.760	-115.290	2.765	-118.330	2.770	-121.450
2.775	-124.660	2.780	-127.950	2.785	-131.340
2.790	-134.810	2.795	-138.380	2.800	-142.040
2.805	-145.790	2.810	-149.650	2.815	-153.600
2.820	-157.650	2.825	-161.800	2.830	-166.060
2.835	-170.430	2.840	-174.900	2.845	-179.470
2.850	-184.160	2.855	-188.950	2.860	-193.860
2.865	-198.870	2.870	-204.000	2.875	-209.240
2.880	-214.590	2.885	-220.050	2.890	-225.630
2.895	-231.320	2.900	-237.110	2.905	-243.020
2.910	-249.030	2.915	-255.160	2.920	-261.380
2.925	-267.710	2.930	-274.140	2.935	-280.670
2.940	-287.290	2.945	-294.000	2.950	-300.800
2.955	-307.680	2.960	-314.630	2.965	-321.640
2.970	-328.720	2.975	-335.870	2.980	-343.090
2.985	-350.350	2.990	-357.610	2.995	-364.780
3.000	-371.590	3.005	-376.970	3.010	-376.530
3.015	-359.720	3.020	-312.190	3.025	-225.020
3.030	-103.720	3.035	31.666	3.040	155.880
3.045	249.610	3.050	305.160	3.055	324.850
3.060	315.790	3.065	285.300	3.070	238.860
3.075	180.500	3.080	113.810	3.085	43.075
3.090	-26.691	3.095	-90.175	3.100	-142.530
3.105	-180.080	3.110	-200.720	3.115	-204.080
3.120	-191.310	3.125	-164.790	3.130	-127.780
3.135	-84.003	3.140	-37.373	3.145	8.332
3.150	49.703	3.155	83.913	3.160	108.880
3.165	123.380	3.170	127.090	3.175	120.520
3.180	104.990	3.185	82.384	3.190	55.011
3.195	25.365	3.200	-4.076	3.205	-31.048

3.210	-53.661	3.215	-70.510	3.220	-80.744
3.225	-84.093	3.230	-80.833	3.235	-71.730
3.240	-57.937	3.245	-40.882	3.250	-22.132
3.255	-3.266	3.260	14.251	3.265	29.168
3.270	40.535	3.275	47.745	3.280	50.564
3.285	49.112	3.290	43.834	3.295	35.435
3.300	24.806	3.305	12.944	3.310	0.862
3.315	-10.489	3.320	-20.289	3.325	-27.900
3.330	-32.905	3.335	-35.120	3.340	-34.591
3.345	-31.571	3.350	-26.487	3.355	-19.891
3.360	-12.410	3.365	-4.690	3.370	2.655
3.375	9.085	3.380	14.175	3.385	17.636
3.390	19.325	3.395	19.251	3.400	17.555
3.405	14.494	3.410	10.412	3.415	5.702
3.420	0.779	3.425	-3.961	3.430	-8.166
3.435	-11.552	3.440	-13.920	3.445	-15.168
3.450	-15.285	3.455	-14.350	3.460	-12.517
3.465	-9.997	3.470	-7.038	3.475	-3.901
3.480	-0.845	3.485	1.903	3.490	4.153
3.495	5.770	3.500	6.679	3.505	6.864
3.510	6.367	3.515	5.280	3.520	3.732
3.525	1.879	3.530	-0.112	3.535	-2.076
3.540	-3.864	3.545	-5.351	3.550	-6.445
3.555	-7.092	3.560	-7.277	3.565	-7.021
3.570	-6.379	3.575	-5.429	3.580	-4.268
3.585	-3.004	3.590	-1.741	3.595	-0.576
3.600	0.408	3.605	1.148	3.610	1.608
3.615	1.772	3.620	1.653	3.625	1.280
3.630	0.702	3.635	-0.019	3.640	-0.818
3.645	-1.625	3.650	-2.379	3.655	-3.024
3.660	-3.520	3.665	-3.839	3.670	-3.970
3.675	-3.918	3.680	-3.701	3.685	-3.349
3.690	-2.898	3.695	-2.392	3.700	-1.873
3.705	-1.383	3.710	-0.957	3.715	-0.623
3.720	-0.400	3.725	-0.296	3.730	-0.310
3.735	-0.431	3.740	-0.642	3.745	-0.919
3.750	-1.237	3.755	-1.566	3.760	-1.880
3.765	-2.157	3.770	-2.378	3.775	-2.530
3.780	-2.606	3.785	-2.606	3.790	-2.536
3.795	-2.408	3.800	-2.234	3.805	-2.033
3.810	-1.821	3.815	-1.616	3.820	-1.433
3.825	-1.284	3.830	-1.178	3.835	-1.120
3.840	-1.111	3.845	-1.147	3.850	-1.222
3.855	-1.327	3.860	-1.451	3.865	-1.584
3.870	-1.714	3.875	-1.831	3.880	-1.928
3.885	-1.998	3.890	-2.037	3.895	-2.046
3.900	-2.025	3.905	-1.979	3.910	-1.913
3.915	-1.833	3.920	-1.747	3.925	-1.661
3.930	-1.583	3.935	-1.517	3.940	-1.467
3.945	-1.437	3.950	-1.427	3.955	-1.435
3.960	-1.461	3.965	-1.499	3.970	-1.547
3.975	-1.600	3.980	-1.653	3.985	-1.702
3.990	-1.743	3.995	-1.774	4.000	-1.794

1.0	FUNCTION 2				
0.000	0.000	0.005	0.179	0.010	0.178
0.015	0.177	0.020	0.177	0.025	0.176
0.030	0.174	0.035	0.172	0.040	0.169
0.045	0.166	0.050	0.162	0.055	0.158
0.060	0.154	0.065	0.150	0.070	0.145
0.075	0.140	0.080	0.136	0.085	0.131
0.090	0.126	0.095	0.121	0.100	0.116
0.105	0.111	0.110	0.106	0.115	0.101
0.120	0.095	0.125	0.090	0.130	0.084
0.135	0.079	0.140	0.073	0.145	0.067
0.150	0.061	0.155	0.055	0.160	0.049
0.165	0.043	0.170	0.037	0.175	0.030

0.180	0.024	0.185	0.017	0.190	0.011
0.195	0.004	0.200	-0.003	0.205	-0.010
0.210	-0.017	0.215	-0.024	0.220	-0.031
0.225	-0.039	0.230	-0.046	0.235	-0.053
0.240	-0.061	0.245	-0.068	0.250	-0.076
0.255	-0.083	0.260	-0.091	0.265	-0.098
0.270	-0.106	0.275	-0.113	0.280	-0.121
0.285	-0.129	0.290	-0.136	0.295	-0.144
0.300	-0.152	0.305	-0.159	0.310	-0.167
0.315	-0.175	0.320	-0.183	0.325	-0.191
0.330	-0.199	0.335	-0.207	0.340	-0.215
0.345	-0.223	0.350	-0.231	0.355	-0.239
0.360	-0.248	0.365	-0.256	0.370	-0.264
0.375	-0.273	0.380	-0.282	0.385	-0.290
0.390	-0.299	0.395	-0.308	0.400	-0.317
0.405	-0.326	0.410	-0.335	0.415	-0.344
0.420	-0.354	0.425	-0.363	0.430	-0.372
0.435	-0.382	0.440	-0.391	0.445	-0.401
0.450	-0.410	0.455	-0.420	0.460	-0.430
0.465	-0.439	0.470	-0.449	0.475	-0.459
0.480	-0.468	0.485	-0.478	0.490	-0.488
0.495	-0.497	0.500	-0.507	0.505	-0.517
0.510	-0.527	0.515	-0.536	0.520	-0.546
0.525	-0.556	0.530	-0.566	0.535	-0.576
0.540	-0.585	0.545	-0.595	0.550	-0.605
0.555	-0.615	0.560	-0.625	0.565	-0.636
0.570	-0.646	0.575	-0.656	0.580	-0.666
0.585	-0.676	0.590	-0.687	0.595	-0.697
0.600	-0.708	0.605	-0.718	0.610	-0.729
0.615	-0.740	0.620	-0.750	0.625	-0.761
0.630	-0.772	0.635	-0.783	0.640	-0.794
0.645	-0.805	0.650	-0.817	0.655	-0.828
0.660	-0.839	0.665	-0.851	0.670	-0.862
0.675	-0.874	0.680	-0.886	0.685	-0.897
0.690	-0.909	0.695	-0.921	0.700	-0.934
0.705	-0.946	0.710	-0.958	0.715	-0.971
0.720	-0.983	0.725	-0.996	0.730	-1.009
0.735	-1.022	0.740	-1.035	0.745	-1.048
0.750	-1.062	0.755	-1.075	0.760	-1.089
0.765	-1.103	0.770	-1.117	0.775	-1.131
0.780	-1.145	0.785	-1.160	0.790	-1.174
0.795	-1.189	0.800	-1.204	0.805	-1.219
0.810	-1.234	0.815	-1.250	0.820	-1.265
0.825	-1.281	0.830	-1.297	0.835	-1.313
0.840	-1.329	0.845	-1.345	0.850	-1.362
0.855	-1.378	0.860	-1.395	0.865	-1.412
0.870	-1.429	0.875	-1.447	0.880	-1.464
0.885	-1.482	0.890	-1.500	0.895	-1.518
0.900	-1.536	0.905	-1.554	0.910	-1.573
0.915	-1.591	0.920	-1.610	0.925	-1.629
0.930	-1.649	0.935	-1.668	0.940	-1.688
0.945	-1.708	0.950	-1.728	0.955	-1.748
0.960	-1.769	0.965	-1.789	0.970	-1.810
0.975	-1.831	0.980	-1.853	0.985	-1.874
0.990	-1.896	0.995	-1.918	1.000	-1.940
1.005	-1.963	1.010	-1.985	1.015	-2.008
1.020	-2.031	1.025	-2.055	1.030	-2.078
1.035	-2.102	1.040	-2.126	1.045	-2.151
1.050	-2.175	1.055	-2.200	1.060	-2.225
1.065	-2.251	1.070	-2.276	1.075	-2.302
1.080	-2.328	1.085	-2.355	1.090	-2.382
1.095	-2.409	1.100	-2.436	1.105	-2.464
1.110	-2.491	1.115	-2.520	1.120	-2.548
1.125	-2.577	1.130	-2.606	1.135	-2.635
1.140	-2.665	1.145	-2.695	1.150	-2.726
1.155	-2.756	1.160	-2.787	1.165	-2.819

1.170	-2.850	1.175	-2.882	1.180	-2.915
1.185	-2.947	1.190	-2.980	1.195	-3.014
1.200	-3.048	1.205	-3.082	1.210	-3.116
1.215	-3.151	1.220	-3.186	1.225	-3.222
1.230	-3.258	1.235	-3.294	1.240	-3.331
1.245	-3.368	1.250	-3.406	1.255	-3.444
1.260	-3.482	1.265	-3.521	1.270	-3.561
1.275	-3.600	1.280	-3.641	1.285	-3.681
1.290	-3.722	1.295	-3.764	1.300	-3.806
1.305	-3.848	1.310	-3.891	1.315	-3.935
1.320	-3.979	1.325	-4.023	1.330	-4.068
1.335	-4.114	1.340	-4.160	1.345	-4.206
1.350	-4.253	1.355	-4.301	1.360	-4.349
1.365	-4.398	1.370	-4.447	1.375	-4.497
1.380	-4.548	1.385	-4.599	1.390	-4.651
1.395	-4.703	1.400	-4.756	1.405	-4.810
1.410	-4.864	1.415	-4.919	1.420	-4.975
1.425	-5.031	1.430	-5.088	1.435	-5.146
1.440	-5.204	1.445	-5.263	1.450	-5.323
1.455	-5.384	1.460	-5.445	1.465	-5.507
1.470	-5.570	1.475	-5.634	1.480	-5.699
1.485	-5.764	1.490	-5.830	1.495	-5.898
1.500	-5.966	1.505	-6.034	1.510	-6.104
1.515	-6.175	1.520	-6.246	1.525	-6.319
1.530	-6.392	1.535	-6.467	1.540	-6.542
1.545	-6.619	1.550	-6.696	1.555	-6.775
1.560	-6.854	1.565	-6.935	1.570	-7.017
1.575	-7.099	1.580	-7.183	1.585	-7.268
1.590	-7.355	1.595	-7.442	1.600	-7.531
1.605	-7.621	1.610	-7.712	1.615	-7.804
1.620	-7.898	1.625	-7.993	1.630	-8.089
1.635	-8.187	1.640	-8.286	1.645	-8.387
1.650	-8.489	1.655	-8.592	1.660	-8.697
1.665	-8.803	1.670	-8.911	1.675	-9.021
1.680	-9.132	1.685	-9.244	1.690	-9.359
1.695	-9.475	1.700	-9.592	1.705	-9.712
1.710	-9.833	1.715	-9.956	1.720	-10.081
1.725	-10.208	1.730	-10.337	1.735	-10.467
1.740	-10.600	1.745	-10.734	1.750	-10.871
1.755	-11.010	1.760	-11.151	1.765	-11.294
1.770	-11.439	1.775	-11.587	1.780	-11.736
1.785	-11.889	1.790	-12.043	1.795	-12.200
1.800	-12.360	1.805	-12.522	1.810	-12.686
1.815	-12.854	1.820	-13.024	1.825	-13.196
1.830	-13.372	1.835	-13.550	1.840	-13.731
1.845	-13.915	1.850	-14.102	1.855	-14.292
1.860	-14.486	1.865	-14.682	1.870	-14.882
1.875	-15.085	1.880	-15.292	1.885	-15.501
1.890	-15.715	1.895	-15.932	1.900	-16.153
1.905	-16.377	1.910	-16.606	1.915	-16.838
1.920	-17.074	1.925	-17.314	1.930	-17.559
1.935	-17.808	1.940	-18.061	1.945	-18.318
1.950	-18.580	1.955	-18.847	1.960	-19.118
1.965	-19.394	1.970	-19.675	1.975	-19.961
1.980	-20.253	1.985	-20.549	1.990	-20.851
1.995	-21.158	2.000	-21.471	2.005	-21.790
2.010	-22.114	2.015	-22.444	2.020	-22.781
2.025	-23.124	2.030	-23.473	2.035	-23.828
2.040	-24.191	2.045	-24.560	2.050	-24.936
2.055	-25.319	2.060	-25.710	2.065	-26.108
2.070	-26.513	2.075	-26.927	2.080	-27.348
2.085	-27.778	2.090	-28.216	2.095	-28.662
2.100	-29.118	2.105	-29.582	2.110	-30.055
2.115	-30.538	2.120	-31.030	2.125	-31.533
2.130	-32.045	2.135	-32.568	2.140	-33.101
2.145	-33.645	2.150	-34.200	2.155	-34.766

2.160	-35.345	2.165	-35.935	2.170	-36.537
2.175	-37.151	2.180	-37.779	2.185	-38.420
2.190	-39.074	2.195	-39.742	2.200	-40.424
2.205	-41.120	2.210	-41.832	2.215	-42.558
2.220	-43.301	2.225	-44.059	2.230	-44.834
2.235	-45.625	2.240	-46.434	2.245	-47.261
2.250	-48.106	2.255	-48.969	2.260	-49.852
2.265	-50.754	2.270	-51.677	2.275	-52.620
2.280	-53.584	2.285	-54.570	2.290	-55.579
2.295	-56.611	2.300	-57.666	2.305	-58.745
2.310	-59.850	2.315	-60.980	2.320	-62.136
2.325	-63.319	2.330	-64.530	2.335	-65.769
2.340	-67.038	2.345	-68.336	2.350	-69.666
2.355	-71.027	2.360	-72.421	2.365	-73.848
2.370	-75.310	2.375	-76.807	2.380	-78.341
2.385	-79.912	2.390	-81.522	2.395	-83.171
2.400	-84.862	2.405	-86.594	2.410	-88.369
2.415	-90.188	2.420	-92.053	2.425	-93.965
2.430	-95.925	2.435	-97.935	2.440	-99.996
2.445	-102.110	2.450	-104.280	2.455	-106.500
2.460	-108.780	2.465	-111.120	2.470	-113.520
2.475	-115.990	2.480	-118.510	2.485	-121.110
2.490	-123.770	2.495	-126.500	2.500	-129.310
2.505	-132.190	2.510	-135.150	2.515	-138.180
2.520	-141.300	2.525	-144.500	2.530	-147.790
2.535	-151.160	2.540	-154.630	2.545	-158.190
2.550	-161.850	2.555	-165.610	2.560	-169.480
2.565	-173.450	2.570	-177.530	2.575	-181.720
2.580	-186.030	2.585	-190.450	2.590	-195.010
2.595	-199.680	2.600	-204.490	2.605	-209.440
2.610	-214.520	2.615	-219.750	2.620	-225.120
2.625	-230.640	2.630	-236.320	2.635	-242.170
2.640	-248.170	2.645	-254.350	2.650	-260.700
2.655	-267.230	2.660	-273.950	2.665	-280.860
2.670	-287.970	2.675	-295.270	2.680	-302.790
2.685	-310.520	2.690	-318.470	2.695	-326.640
2.700	-335.050	2.705	-343.690	2.710	-352.580
2.715	-361.720	2.720	-371.120	2.725	-380.790
2.730	-390.720	2.735	-400.940	2.740	-411.440
2.745	-422.230	2.750	-433.320	2.755	-444.720
2.760	-456.440	2.765	-468.470	2.770	-480.840
2.775	-493.540	2.780	-506.590	2.785	-519.980
2.790	-533.740	2.795	-547.850	2.800	-562.340
2.805	-577.210	2.810	-592.470	2.815	-608.110
2.820	-624.160	2.825	-640.610	2.830	-657.470
2.835	-674.740	2.840	-692.430	2.845	-710.550
2.850	-729.100	2.855	-748.080	2.860	-767.500
2.865	-787.360	2.870	-807.660	2.875	-828.410
2.880	-849.590	2.885	-871.220	2.890	-893.290
2.895	-915.800	2.900	-938.750	2.905	-962.140
2.910	-985.950	2.915	-1010.200	2.920	-1034.800
2.925	-1059.900	2.930	-1085.400	2.935	-1111.200
2.940	-1137.400	2.945	-1164.000	2.950	-1190.900
2.955	-1218.100	2.960	-1245.600	2.965	-1273.400
2.970	-1301.400	2.975	-1329.700	2.980	-1358.300
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3.000	-1471.000	3.005	-1492.100	3.010	-1489.300
3.015	-1420.300	3.020	-1228.600	3.025	-881.660
3.030	-402.750	3.035	128.590	3.040	614.480
3.045	981.120	3.050	1199.300	3.055	1277.700
3.060	1243.500	3.065	1124.500	3.070	942.000
3.075	711.800	3.080	448.650	3.085	169.600
3.090	-105.430	3.095	-355.520	3.100	-561.670
3.105	-709.460	3.110	-790.720	3.115	-803.930
3.120	-753.630	3.125	-649.210	3.130	-503.430
3.135	-331.000	3.140	-147.300	3.145	32.762

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3.150     195.760     3.155     330.540     3.160     428.910
3.165     486.030     3.170     500.610     3.175     474.760
3.180     413.570     3.185     324.510     3.190     216.680
3.195      99.897     3.200     -16.082     3.205    -122.340
3.210    -211.420     3.215    -277.800     3.220    -318.120
3.225    -331.320     3.230    -318.480     3.235    -282.620
3.240    -228.280     3.245    -161.100     3.250     -87.231
3.255     -12.907     3.260      56.100     3.265     114.870
3.270     159.650     3.275     188.050     3.280     199.160
3.285     193.440     3.290     172.650     3.295     139.560
3.300      97.691     3.305      50.962     3.310       3.364
3.315     -41.354     3.320     -79.959     3.325    -109.940
3.330    -129.660     3.335    -138.390     3.340    -136.300
3.345    -124.410     3.350    -104.380     3.355     -78.398
3.360     -48.926     3.365     -18.513     3.370      10.421
3.375      35.753     3.380      55.806     3.385      69.439
3.390      76.095     3.395      75.802     3.400      69.121
3.405      57.065     3.410      40.982     3.415      22.430
3.420       3.035     3.425     -15.639     3.430     -32.203
3.435     -45.541     3.440     -54.873     3.445     -59.789
3.450     -60.250     3.455     -56.568     3.460     -49.346
3.465     -39.418     3.470     -27.760     3.475     -15.405
3.480      -3.363     3.485       7.460     3.490      16.324
3.495      22.696     3.500      26.276     3.505      27.005
3.510      25.048     3.515      20.765     3.520      14.667
3.525       7.369     3.530      -0.474     3.535      -8.212
3.540     -15.255     3.545     -21.112     3.550     -25.423
3.555     -27.973     3.560     -28.702     3.565     -27.695
3.570     -25.163     3.575     -21.420     3.580     -16.850
3.585     -11.868     3.590      -6.891     3.595      -2.304
3.600       1.571     3.605       4.489     3.610       6.299
3.615       6.948     3.620       6.476     3.625       5.007
3.630       2.732     3.635      -0.110     3.640      -3.256
3.645      -6.437     3.650      -9.405     3.655     -11.947
3.660     -13.900     3.665     -15.157     3.670     -15.674
3.675     -15.470     3.680     -14.615     3.685     -13.226
3.690     -11.450     3.695      -9.456     3.700      -7.412
3.705      -5.482     3.710      -3.804     3.715      -2.489
3.720      -1.609     3.725      -1.199     3.730      -1.253
3.735      -1.731     3.740      -2.562     3.745      -3.655
3.750      -4.904     3.755      -6.201     3.760      -7.441
3.765      -8.532     3.770      -9.401     3.775      -9.998
3.780     -10.297     3.785     -10.299     3.790     -10.025
3.795      -9.518     3.800      -8.834     3.805      -8.040
3.810      -7.206     3.815      -6.398     3.820      -5.677
3.825      -5.091     3.830      -4.674     3.835      -4.446
3.840      -4.409     3.845      -4.551     3.850      -4.845
3.855      -5.259     3.860      -5.749     3.865      -6.272
3.870      -6.784     3.875      -7.247     3.880      -7.627
3.885      -7.902     3.890      -8.059     3.895      -8.093
3.900      -8.011     3.905      -7.829     3.910      -7.568
3.915      -7.253     3.920      -6.913     3.925      -6.576
3.930      -6.267     3.935      -6.008     3.940      -5.813
3.945      -5.694     3.950      -5.653     3.955      -5.687
3.960      -5.786     3.965      -5.938     3.970      -6.127
3.975      -6.335     3.980      -6.543     3.985      -6.736
3.990      -6.900     3.995      -7.022     4.000      -7.098
801       1.0      FUNCTION 3
0.000      0.000     0.005       0.307     0.010       0.306
0.015      0.305     0.020       0.303     0.025       0.301
0.030      0.299     0.035       0.295     0.040       0.290
0.045      0.285     0.050       0.279     0.055       0.272
0.060      0.264     0.065       0.257     0.070       0.249
0.075      0.241     0.080       0.233     0.085       0.225
0.090      0.216     0.095       0.208     0.100       0.199
0.105      0.191     0.110       0.182     0.115       0.173
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0.120	0.164	0.125	0.154	0.130	0.145
0.135	0.135	0.140	0.125	0.145	0.115
0.150	0.105	0.155	0.095	0.160	0.084
0.165	0.074	0.170	0.063	0.175	0.052
0.180	0.041	0.185	0.029	0.190	0.018
0.195	0.006	0.200	-0.005	0.205	-0.017
0.210	-0.029	0.215	-0.042	0.220	-0.054
0.225	-0.066	0.230	-0.079	0.235	-0.091
0.240	-0.104	0.245	-0.117	0.250	-0.130
0.255	-0.143	0.260	-0.156	0.265	-0.169
0.270	-0.182	0.275	-0.195	0.280	-0.208
0.285	-0.221	0.290	-0.234	0.295	-0.247
0.300	-0.261	0.305	-0.274	0.310	-0.287
0.315	-0.301	0.320	-0.314	0.325	-0.328
0.330	-0.341	0.335	-0.355	0.340	-0.369
0.345	-0.383	0.350	-0.397	0.355	-0.411
0.360	-0.425	0.365	-0.440	0.370	-0.454
0.375	-0.469	0.380	-0.484	0.385	-0.499
0.390	-0.514	0.395	-0.529	0.400	-0.545
0.405	-0.560	0.410	-0.575	0.415	-0.592
0.420	-0.608	0.425	-0.624	0.430	-0.640
0.435	-0.656	0.440	-0.672	0.445	-0.689
0.450	-0.705	0.455	-0.721	0.460	-0.738
0.465	-0.754	0.470	-0.771	0.475	-0.788
0.480	-0.804	0.485	-0.821	0.490	-0.837
0.495	-0.854	0.500	-0.871	0.505	-0.888
0.510	-0.904	0.515	-0.921	0.520	-0.938
0.525	-0.955	0.530	-0.972	0.535	-0.989
0.540	-1.006	0.545	-1.023	0.550	-1.040
0.555	-1.057	0.560	-1.074	0.565	-1.092
0.570	-1.109	0.575	-1.127	0.580	-1.144
0.585	-1.162	0.590	-1.180	0.595	-1.198
0.600	-1.216	0.605	-1.234	0.610	-1.252
0.615	-1.270	0.620	-1.289	0.625	-1.308
0.630	-1.326	0.635	-1.345	0.640	-1.364
0.645	-1.383	0.650	-1.403	0.655	-1.422
0.660	-1.442	0.665	-1.461	0.670	-1.481
0.675	-1.501	0.680	-1.521	0.685	-1.542
0.690	-1.562	0.695	-1.583	0.700	-1.604
0.705	-1.625	0.710	-1.646	0.715	-1.667
0.720	-1.689	0.725	-1.711	0.730	-1.733
0.735	-1.755	0.740	-1.778	0.745	-1.801
0.750	-1.824	0.755	-1.847	0.760	-1.870
0.765	-1.894	0.770	-1.918	0.775	-1.943
0.780	-1.967	0.785	-1.992	0.790	-2.017
0.795	-2.042	0.800	-2.068	0.805	-2.094
0.810	-2.120	0.815	-2.146	0.820	-2.173
0.825	-2.200	0.830	-2.227	0.835	-2.255
0.840	-2.283	0.845	-2.311	0.850	-2.339
0.855	-2.368	0.860	-2.396	0.865	-2.426
0.870	-2.455	0.875	-2.485	0.880	-2.515
0.885	-2.545	0.890	-2.576	0.895	-2.607
0.900	-2.638	0.905	-2.669	0.910	-2.701
0.915	-2.733	0.920	-2.766	0.925	-2.799
0.930	-2.832	0.935	-2.865	0.940	-2.899
0.945	-2.933	0.950	-2.968	0.955	-3.002
0.960	-3.038	0.965	-3.073	0.970	-3.109
0.975	-3.145	0.980	-3.182	0.985	-3.219
0.990	-3.256	0.995	-3.294	1.000	-3.332
1.005	-3.371	1.010	-3.410	1.015	-3.449
1.020	-3.489	1.025	-3.529	1.030	-3.570
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1.050	-3.736	1.055	-3.779	1.060	-3.822
1.065	-3.866	1.070	-3.910	1.075	-3.954
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1.095	-4.137	1.100	-4.184	1.105	-4.231

1.110	-4.279	1.115	-4.328	1.120	-4.377
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1.140	-4.578	1.145	-4.629	1.150	-4.681
1.155	-4.734	1.160	-4.787	1.165	-4.841
1.170	-4.895	1.175	-4.950	1.180	-5.006
1.185	-5.062	1.190	-5.119	1.195	-5.176
1.200	-5.234	1.205	-5.293	1.210	-5.352
1.215	-5.412	1.220	-5.473	1.225	-5.534
1.230	-5.596	1.235	-5.658	1.240	-5.721
1.245	-5.785	1.250	-5.850	1.255	-5.915
1.260	-5.981	1.265	-6.048	1.270	-6.116
1.275	-6.184	1.280	-6.253	1.285	-6.323
1.290	-6.393	1.295	-6.465	1.300	-6.537
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1.320	-6.834	1.325	-6.910	1.330	-6.987
1.335	-7.065	1.340	-7.144	1.345	-7.224
1.350	-7.305	1.355	-7.387	1.360	-7.470
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1.440	-8.938	1.445	-9.040	1.450	-9.143
1.455	-9.247	1.460	-9.353	1.465	-9.459
1.470	-9.568	1.475	-9.677	1.480	-9.788
1.485	-9.900	1.490	-10.014	1.495	-10.129
1.500	-10.246	1.505	-10.365	1.510	-10.484
1.515	-10.606	1.520	-10.729	1.525	-10.853
1.530	-10.979	1.535	-11.107	1.540	-11.237
1.545	-11.368	1.550	-11.501	1.555	-11.636
1.560	-11.773	1.565	-11.911	1.570	-12.052
1.575	-12.194	1.580	-12.338	1.585	-12.484
1.590	-12.632	1.595	-12.783	1.600	-12.935
1.605	-13.089	1.610	-13.246	1.615	-13.405
1.620	-13.565	1.625	-13.729	1.630	-13.894
1.635	-14.062	1.640	-14.232	1.645	-14.405
1.650	-14.580	1.655	-14.757	1.660	-14.938
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1.680	-15.684	1.685	-15.878	1.690	-16.074
1.695	-16.274	1.700	-16.476	1.705	-16.681
1.710	-16.889	1.715	-17.101	1.720	-17.315
1.725	-17.533	1.730	-17.754	1.735	-17.979
1.740	-18.206	1.745	-18.438	1.750	-18.672
1.755	-18.911	1.760	-19.153	1.765	-19.398
1.770	-19.648	1.775	-19.901	1.780	-20.159
1.785	-20.420	1.790	-20.686	1.795	-20.955
1.800	-21.229	1.805	-21.508	1.810	-21.790
1.815	-22.078	1.820	-22.370	1.825	-22.666
1.830	-22.967	1.835	-23.274	1.840	-23.585
1.845	-23.901	1.850	-24.222	1.855	-24.549
1.860	-24.881	1.865	-25.219	1.870	-25.562
1.875	-25.911	1.880	-26.265	1.885	-26.626
1.890	-26.993	1.895	-27.366	1.900	-27.745
1.905	-28.130	1.910	-28.523	1.915	-28.922
1.920	-29.327	1.925	-29.740	1.930	-30.160
1.935	-30.587	1.940	-31.022	1.945	-31.464
1.950	-31.914	1.955	-32.372	1.960	-32.838
1.965	-33.313	1.970	-33.795	1.975	-34.287
1.980	-34.787	1.985	-35.296	1.990	-35.815
1.995	-36.343	2.000	-36.880	2.005	-37.427
2.010	-37.985	2.015	-38.552	2.020	-39.130
2.025	-39.719	2.030	-40.319	2.035	-40.930
2.040	-41.552	2.045	-42.186	2.050	-42.832
2.055	-43.490	2.060	-44.161	2.065	-44.845
2.070	-45.542	2.075	-46.252	2.080	-46.976
2.085	-47.714	2.090	-48.466	2.095	-49.233

2.100	-50.015	2.105	-50.812	2.110	-51.626
2.115	-52.455	2.120	-53.301	2.125	-54.164
2.130	-55.044	2.135	-55.941	2.140	-56.857
2.145	-57.792	2.150	-58.745	2.155	-59.719
2.160	-60.712	2.165	-61.725	2.170	-62.760
2.175	-63.816	2.180	-64.894	2.185	-65.994
2.190	-67.118	2.195	-68.265	2.200	-69.437
2.205	-70.633	2.210	-71.856	2.215	-73.104
2.220	-74.379	2.225	-75.682	2.230	-77.012
2.235	-78.372	2.240	-79.762	2.245	-81.182
2.250	-82.633	2.255	-84.116	2.260	-85.633
2.265	-87.183	2.270	-88.767	2.275	-90.388
2.280	-92.044	2.285	-93.739	2.290	-95.471
2.295	-97.243	2.300	-99.056	2.305	-100.910
2.310	-102.810	2.315	-104.750	2.320	-106.730
2.325	-108.770	2.330	-110.850	2.335	-112.980
2.340	-115.160	2.345	-117.390	2.350	-119.670
2.355	-122.010	2.360	-124.400	2.365	-126.860
2.370	-129.370	2.375	-131.940	2.380	-134.570
2.385	-137.270	2.390	-140.040	2.395	-142.870
2.400	-145.780	2.405	-148.750	2.410	-151.800
2.415	-154.930	2.420	-158.130	2.425	-161.420
2.430	-164.780	2.435	-168.240	2.440	-171.780
2.445	-175.410	2.450	-179.130	2.455	-182.950
2.460	-186.870	2.465	-190.890	2.470	-195.020
2.475	-199.250	2.480	-203.590	2.485	-208.050
2.490	-212.620	2.495	-217.320	2.500	-222.130
2.505	-227.080	2.510	-232.160	2.515	-237.380
2.520	-242.730	2.525	-248.230	2.530	-253.880
2.535	-259.680	2.540	-265.640	2.545	-271.760
2.550	-278.050	2.555	-284.510	2.560	-291.140
2.565	-297.960	2.570	-304.970	2.575	-312.170
2.580	-319.580	2.585	-327.180	2.590	-335.000
2.595	-343.040	2.600	-351.300	2.605	-359.800
2.610	-368.530	2.615	-377.510	2.620	-386.740
2.625	-396.230	2.630	-405.990	2.635	-416.020
2.640	-426.340	2.645	-436.950	2.650	-447.870
2.655	-459.090	2.660	-470.630	2.665	-482.500
2.670	-494.710	2.675	-507.260	2.680	-520.170
2.685	-533.450	2.690	-547.110	2.695	-561.150
2.700	-575.590	2.705	-590.450	2.710	-605.720
2.715	-621.420	2.720	-637.570	2.725	-654.170
2.730	-671.240	2.735	-688.790	2.740	-706.830
2.745	-725.370	2.750	-744.430	2.755	-764.010
2.760	-784.130	2.765	-804.810	2.770	-826.050
2.775	-847.870	2.780	-870.280	2.785	-893.290
2.790	-916.920	2.795	-941.170	2.800	-966.070
2.805	-991.610	2.810	-1017.800	2.815	-1044.700
2.820	-1072.200	2.825	-1100.500	2.830	-1129.500
2.835	-1159.100	2.840	-1189.500	2.845	-1220.600
2.850	-1252.500	2.855	-1285.100	2.860	-1318.500
2.865	-1352.600	2.870	-1387.400	2.875	-1423.100
2.880	-1459.500	2.885	-1496.600	2.890	-1534.500
2.895	-1573.200	2.900	-1612.600	2.905	-1652.700
2.910	-1693.600	2.915	-1735.300	2.920	-1777.600
2.925	-1820.600	2.930	-1864.300	2.935	-1908.700
2.940	-1953.700	2.945	-1999.300	2.950	-2045.500
2.955	-2092.300	2.960	-2139.500	2.965	-2187.200
2.970	-2235.400	2.975	-2284.000	2.980	-2333.000
2.985	-2382.400	2.990	-2431.600	2.995	-2480.000
3.000	-2525.500	3.005	-2558.800	3.010	-2542.000
3.015	-2395.500	3.020	-2030.100	3.025	-1413.000
3.030	-606.870	3.035	253.880	3.040	1025.200
3.045	1607.700	3.050	1963.700	3.055	2104.100
3.060	2062.500	3.065	1875.900	3.070	1576.200
3.075	1191.200	3.080	748.960	3.085	280.920

3.090	-178.410	3.095	-594.300	3.100	-935.980
3.105	-1180.400	3.110	-1314.700	3.115	-1336.400
3.120	-1253.000	3.125	-1079.700	3.130	-837.660
3.135	-551.110	3.140	-245.640	3.145	53.906
3.150	325.090	3.155	549.310	3.160	712.910
3.165	807.870	3.170	832.070	3.175	789.030
3.180	687.260	3.185	539.180	3.190	359.890
3.195	165.730	3.200	-27.105	3.205	-203.790
3.210	-351.930	3.215	-452.320	3.220	-529.390
3.225	-551.350	3.230	-530.010	3.235	-470.380
3.240	-380.030	3.245	-268.300	3.250	-145.460
3.255	-21.866	3.260	92.888	3.265	190.610
3.270	265.070	3.275	312.310	3.280	330.770
3.285	321.270	3.290	286.690	3.295	231.680
3.300	162.060	3.305	84.355	3.310	5.209
3.315	-69.149	3.320	-133.350	3.325	-183.210
3.330	-216.000	3.335	-230.520	3.340	-227.050
3.345	-207.270	3.350	-173.970	3.355	-130.760
3.360	-81.755	3.365	-31.180	3.370	16.934
3.375	59.059	3.380	92.405	3.385	115.080
3.390	126.150	3.395	125.660	3.400	114.550
3.405	94.503	3.410	67.761	3.415	36.913
3.420	4.662	3.425	-26.389	3.430	-53.934
3.435	-76.114	3.440	-91.633	3.445	-99.808
3.450	-100.580	3.455	-94.452	3.460	-82.444
3.465	-65.935	3.470	-46.548	3.475	-26.004
3.480	-5.980	3.485	12.020	3.490	26.760
3.495	37.355	3.500	43.309	3.505	44.522
3.510	41.268	3.515	34.146	3.520	24.008
3.525	11.872	3.530	-1.170	3.535	-14.037
3.540	-25.748	3.545	-35.487	3.550	-42.655
3.555	-46.896	3.560	-48.108	3.565	-46.433
3.570	-42.223	3.575	-36.000	3.580	-28.399
3.585	-20.114	3.590	-11.839	3.595	-4.210
3.600	2.234	3.605	7.086	3.610	10.096
3.615	11.176	3.620	10.391	3.625	7.949
3.630	4.166	3.635	-0.559	3.640	-5.789
3.645	-11.079	3.650	-16.015	3.655	-20.242
3.660	-23.488	3.665	-25.578	3.670	-26.439
3.675	-26.099	3.680	-24.677	3.685	-22.367
3.690	-19.414	3.695	-16.097	3.700	-12.699
3.705	-9.488	3.710	-6.698	3.715	-4.511
3.720	-3.047	3.725	-2.365	3.730	-2.454
3.735	-3.249	3.740	-4.631	3.745	-6.448
3.750	-8.525	3.755	-10.681	3.760	-12.742
3.765	-14.556	3.770	-16.002	3.775	-16.994
3.780	-17.492	3.785	-17.494	3.790	-17.038
3.795	-16.194	3.800	-15.058	3.805	-13.737
3.810	-12.350	3.815	-11.006	3.820	-9.806
3.825	-8.032	3.830	-8.139	3.835	-7.759
3.840	-7.697	3.845	-7.932	3.850	-8.422
3.855	-9.109	3.860	-9.924	3.865	-10.793
3.870	-11.645	3.875	-12.414	3.880	-13.046
3.885	-13.504	3.890	-13.763	3.895	-13.820
3.900	-13.684	3.905	-13.380	3.910	-12.945
3.915	-12.422	3.920	-11.857	3.925	-11.296
3.930	-10.782	3.935	-10.350	3.940	-10.027
3.945	-9.829	3.950	-9.760	3.955	-9.815
3.960	-9.980	3.965	-10.233	3.970	-10.547
3.975	-10.892	3.980	-11.239	3.985	-11.559
3.990	-11.830	3.995	-12.035	4.000	-12.160

801	1.0	FUNCTION 4					
	0.000	0.000	0.005	0.310	0.010	0.309
	0.015	0.308	0.020	0.306	0.025	0.303
	0.030	0.298	0.035	0.292	0.040	0.284
	0.045	0.275	0.050	0.265	0.055	0.253

0.060	0.241	0.065	0.228	0.070	0.215
0.075	0.201	0.080	0.187	0.085	0.172
0.090	0.158	0.095	0.143	0.100	0.128
0.105	0.113	0.110	0.097	0.115	0.081
0.120	0.065	0.125	0.048	0.130	0.032
0.135	0.015	0.140	-0.003	0.145	-0.021
0.150	-0.039	0.155	-0.057	0.160	-0.076
0.165	-0.095	0.170	-0.114	0.175	-0.134
0.180	-0.153	0.185	-0.174	0.190	-0.194
0.195	-0.215	0.200	-0.236	0.205	-0.257
0.210	-0.279	0.215	-0.301	0.220	-0.323
0.225	-0.345	0.230	-0.367	0.235	-0.390
0.240	-0.412	0.245	-0.435	0.250	-0.458
0.255	-0.481	0.260	-0.505	0.265	-0.528
0.270	-0.551	0.275	-0.574	0.280	-0.598
0.285	-0.621	0.290	-0.645	0.295	-0.668
0.300	-0.692	0.305	-0.716	0.310	-0.740
0.315	-0.764	0.320	-0.788	0.325	-0.812
0.330	-0.837	0.335	-0.861	0.340	-0.886
0.345	-0.911	0.350	-0.936	0.355	-0.961
0.360	-0.987	0.365	-1.012	0.370	-1.038
0.375	-1.065	0.380	-1.091	0.385	-1.118
0.390	-1.145	0.395	-1.173	0.400	-1.200
0.405	-1.228	0.410	-1.256	0.415	-1.284
0.420	-1.313	0.425	-1.342	0.430	-1.370
0.435	-1.399	0.440	-1.429	0.445	-1.458
0.450	-1.487	0.455	-1.517	0.460	-1.546
0.465	-1.576	0.470	-1.605	0.475	-1.635
0.480	-1.665	0.485	-1.694	0.490	-1.724
0.495	-1.754	0.500	-1.784	0.505	-1.814
0.510	-1.844	0.515	-1.874	0.520	-1.904
0.525	-1.934	0.530	-1.964	0.535	-1.994
0.540	-2.024	0.545	-2.055	0.550	-2.085
0.555	-2.116	0.560	-2.147	0.565	-2.178
0.570	-2.209	0.575	-2.240	0.580	-2.272
0.585	-2.303	0.590	-2.335	0.595	-2.367
0.600	-2.399	0.605	-2.431	0.610	-2.464
0.615	-2.497	0.620	-2.530	0.625	-2.563
0.630	-2.596	0.635	-2.630	0.640	-2.664
0.645	-2.698	0.650	-2.732	0.655	-2.767
0.660	-2.802	0.665	-2.837	0.670	-2.872
0.675	-2.908	0.680	-2.944	0.685	-2.981
0.690	-3.017	0.695	-3.054	0.700	-3.091
0.705	-3.129	0.710	-3.167	0.715	-3.205
0.720	-3.244	0.725	-3.283	0.730	-3.323
0.735	-3.363	0.740	-3.403	0.745	-3.444
0.750	-3.485	0.755	-3.527	0.760	-3.569
0.765	-3.612	0.770	-3.655	0.775	-3.699
0.780	-3.743	0.785	-3.787	0.790	-3.832
0.795	-3.878	0.800	-3.924	0.805	-3.970
0.810	-4.017	0.815	-4.065	0.820	-4.113
0.825	-4.161	0.830	-4.210	0.835	-4.260
0.840	-4.310	0.845	-4.360	0.850	-4.411
0.855	-4.463	0.860	-4.515	0.865	-4.567
0.870	-4.620	0.875	-4.674	0.880	-4.728
0.885	-4.782	0.890	-4.837	0.895	-4.893
0.900	-4.949	0.905	-5.006	0.910	-5.064
0.915	-5.122	0.920	-5.180	0.925	-5.239
0.930	-5.299	0.935	-5.359	0.940	-5.420
0.945	-5.482	0.950	-5.544	0.955	-5.607
0.960	-5.670	0.965	-5.734	0.970	-5.799
0.975	-5.865	0.980	-5.931	0.985	-5.998
0.990	-6.065	0.995	-6.134	1.000	-6.203
1.005	-6.272	1.010	-6.343	1.015	-6.414
1.020	-6.486	1.025	-6.558	1.030	-6.632
1.035	-6.706	1.040	-6.781	1.045	-6.856

1.050	-6.933	1.055	-7.010	1.060	-7.088
1.065	-7.167	1.070	-7.247	1.075	-7.327
1.080	-7.409	1.085	-7.491	1.090	-7.574
1.095	-7.658	1.100	-7.743	1.105	-7.829
1.110	-7.916	1.115	-8.003	1.120	-8.092
1.125	-8.182	1.130	-8.272	1.135	-8.364
1.140	-8.456	1.145	-8.549	1.150	-8.644
1.155	-8.739	1.160	-8.836	1.165	-8.933
1.170	-9.032	1.175	-9.132	1.180	-9.233
1.185	-9.334	1.190	-9.437	1.195	-9.541
1.200	-9.647	1.205	-9.753	1.210	-9.860
1.215	-9.969	1.220	-10.079	1.225	-10.190
1.230	-10.302	1.235	-10.416	1.240	-10.530
1.245	-10.646	1.250	-10.764	1.255	-10.882
1.260	-11.002	1.265	-11.123	1.270	-11.246
1.275	-11.370	1.280	-11.495	1.285	-11.622
1.290	-11.750	1.295	-11.880	1.300	-12.011
1.305	-12.143	1.310	-12.277	1.315	-12.413
1.320	-12.550	1.325	-12.689	1.330	-12.829
1.335	-12.971	1.340	-13.115	1.345	-13.261
1.350	-13.408	1.355	-13.556	1.360	-13.707
1.365	-13.859	1.370	-14.014	1.375	-14.170
1.380	-14.327	1.385	-14.487	1.390	-14.649
1.395	-14.813	1.400	-14.978	1.405	-15.146
1.410	-15.316	1.415	-15.488	1.420	-15.662
1.425	-15.838	1.430	-16.016	1.435	-16.197
1.440	-16.379	1.445	-16.565	1.450	-16.752
1.455	-16.942	1.460	-17.134	1.465	-17.328
1.470	-17.526	1.475	-17.725	1.480	-17.927
1.485	-18.132	1.490	-18.340	1.495	-18.550
1.500	-18.762	1.505	-18.978	1.510	-19.197
1.515	-19.418	1.520	-19.642	1.525	-19.869
1.530	-20.100	1.535	-20.333	1.540	-20.569
1.545	-20.809	1.550	-21.052	1.555	-21.298
1.560	-21.547	1.565	-21.800	1.570	-22.056
1.575	-22.316	1.580	-22.579	1.585	-22.846
1.590	-23.117	1.595	-23.391	1.600	-23.669
1.605	-23.951	1.610	-24.237	1.615	-24.527
1.620	-24.821	1.625	-25.120	1.630	-25.422
1.635	-25.729	1.640	-26.040	1.645	-26.355
1.650	-26.676	1.655	-27.000	1.660	-27.330
1.665	-27.664	1.670	-28.003	1.675	-28.347
1.680	-28.696	1.685	-29.050	1.690	-29.409
1.695	-29.774	1.700	-30.144	1.705	-30.520
1.710	-30.901	1.715	-31.288	1.720	-31.681
1.725	-32.080	1.730	-32.485	1.735	-32.896
1.740	-33.313	1.745	-33.736	1.750	-34.167
1.755	-34.603	1.760	-35.047	1.765	-35.497
1.770	-35.955	1.775	-36.419	1.780	-36.891
1.785	-37.370	1.790	-37.857	1.795	-38.352
1.800	-38.854	1.805	-39.365	1.810	-39.883
1.815	-40.410	1.820	-40.946	1.825	-41.490
1.830	-42.043	1.835	-42.605	1.840	-43.176
1.845	-43.757	1.850	-44.347	1.855	-44.946
1.860	-45.556	1.865	-46.176	1.870	-46.806
1.875	-47.447	1.880	-48.099	1.885	-48.761
1.890	-49.435	1.895	-50.120	1.900	-50.817
1.905	-51.526	1.910	-52.247	1.915	-52.980
1.920	-53.727	1.925	-54.486	1.930	-55.258
1.935	-56.044	1.940	-56.843	1.945	-57.657
1.950	-58.485	1.955	-59.327	1.960	-60.185
1.965	-61.058	1.970	-61.947	1.975	-62.851
1.980	-63.772	1.985	-64.710	1.990	-65.665
1.995	-66.637	2.000	-67.627	2.005	-68.635
2.010	-69.661	2.015	-70.707	2.020	-71.772
2.025	-72.857	2.030	-73.962	2.035	-75.088

2.040	-76.236	2.045	-77.405	2.050	-78.596
2.055	-79.810	2.060	-81.047	2.065	-82.308
2.070	-83.594	2.075	-84.904	2.080	-86.240
2.085	-87.601	2.090	-88.990	2.095	-90.405
2.100	-91.849	2.105	-93.321	2.110	-94.823
2.115	-96.354	2.120	-97.916	2.125	-99.510
2.130	-101.140	2.135	-102.790	2.140	-104.490
2.145	-106.210	2.150	-107.980	2.155	-109.770
2.160	-111.610	2.165	-113.480	2.170	-115.400
2.175	-117.350	2.180	-119.340	2.185	-121.380
2.190	-123.460	2.195	-125.580	2.200	-127.750
2.205	-129.960	2.210	-132.220	2.215	-134.530
2.220	-136.890	2.225	-139.310	2.230	-141.770
2.235	-144.290	2.240	-146.860	2.245	-149.490
2.250	-152.180	2.255	-154.930	2.260	-157.740
2.265	-160.610	2.270	-163.550	2.275	-166.550
2.280	-169.620	2.285	-172.760	2.290	-175.980
2.295	-179.260	2.300	-182.620	2.305	-186.060
2.310	-189.580	2.315	-193.190	2.320	-196.870
2.325	-200.640	2.330	-204.510	2.335	-208.460
2.340	-212.500	2.345	-216.650	2.350	-220.890
2.355	-225.230	2.360	-229.680	2.365	-234.240
2.370	-238.900	2.375	-243.680	2.380	-248.580
2.385	-253.600	2.390	-258.740	2.395	-264.010
2.400	-269.410	2.405	-274.940	2.410	-280.620
2.415	-286.430	2.420	-292.390	2.425	-298.510
2.430	-304.770	2.435	-311.200	2.440	-317.790
2.445	-324.560	2.450	-331.490	2.455	-338.610
2.460	-345.910	2.465	-353.400	2.470	-361.080
2.475	-368.970	2.480	-377.060	2.485	-385.370
2.490	-393.900	2.495	-402.660	2.500	-411.640
2.505	-420.870	2.510	-430.350	2.515	-440.080
2.520	-450.080	2.525	-460.340	2.530	-470.880
2.535	-481.710	2.540	-492.840	2.545	-504.270
2.550	-516.020	2.555	-528.090	2.560	-540.490
2.565	-553.240	2.570	-566.340	2.575	-579.800
2.580	-593.640	2.585	-607.870	2.590	-622.500
2.595	-637.540	2.600	-653.000	2.605	-668.890
2.610	-685.240	2.615	-702.050	2.620	-719.330
2.625	-737.110	2.630	-755.390	2.635	-774.190
2.640	-793.530	2.645	-813.420	2.650	-833.880
2.655	-854.930	2.660	-876.570	2.665	-898.840
2.670	-921.740	2.675	-945.300	2.680	-969.540
2.685	-994.470	2.690	-1020.100	2.695	-1046.500
2.700	-1073.600	2.705	-1101.500	2.710	-1130.200
2.715	-1159.800	2.720	-1190.100	2.725	-1221.300
2.730	-1253.500	2.735	-1286.500	2.740	-1320.400
2.745	-1355.300	2.750	-1391.200	2.755	-1428.100
2.760	-1466.000	2.765	-1505.000	2.770	-1545.100
2.775	-1586.200	2.780	-1628.500	2.785	-1671.900
2.790	-1716.500	2.795	-1762.300	2.800	-1809.300
2.805	-1857.600	2.810	-1907.100	2.815	-1958.000
2.820	-2010.100	2.825	-2063.600	2.830	-2118.400
2.835	-2174.600	2.840	-2232.200	2.845	-2291.200
2.850	-2351.600	2.855	-2413.400	2.860	-2476.800
2.865	-2541.500	2.870	-2607.800	2.875	-2675.500
2.880	-2744.700	2.885	-2815.500	2.890	-2887.700
2.895	-2961.300	2.900	-3036.500	2.905	-3113.200
2.910	-3191.300	2.915	-3270.800	2.920	-3351.800
2.925	-3434.200	2.930	-3517.900	2.935	-3603.100
2.940	-3689.500	2.945	-3777.100	2.950	-3866.000
2.955	-3956.000	2.960	-4047.100	2.965	-4139.100
2.970	-4232.100	2.975	-4325.800	2.980	-4420.000
2.985	-4514.300	2.990	-4608.000	2.995	-4699.000
3.000	-4781.600	3.005	-4824.700	3.010	-4711.300
3.015	-4261.500	3.020	-3375.100	3.025	-2129.000

3.030	-727.570	3.035	619.480	3.040	1771.100
3.045	2657.100	3.050	3248.900	3.055	3538.900
3.060	3535.200	3.065	3262.700	3.070	2763.200
3.075	2091.600	3.080	1311.300	3.085	489.250
3.090	-309.120	3.095	-1024.200	3.100	-1606.700
3.105	-2021.200	3.110	-2248.100	3.115	-2284.200
3.120	-2141.800	3.125	-1845.800	3.130	-1431.300
3.135	-939.580	3.140	-414.490	3.145	100.900
3.150	567.610	3.155	953.380	3.160	1234.600
3.165	1397.700	3.170	1439.000	3.175	1364.900
3.180	1189.900	3.185	935.390	3.190	627.370
3.195	293.790	3.200	-37.538	3.205	-341.190
3.210	-595.850	3.215	-785.690	3.220	-901.090
3.225	-938.930	3.230	-902.320	3.235	-799.860
3.240	-644.560	3.245	-452.490	3.250	-241.340
3.255	-28.879	3.260	168.360	3.265	336.330
3.270	464.290	3.275	545.460	3.280	577.180
3.285	560.840	3.290	501.420	3.295	406.860
3.300	287.220	3.305	153.680	3.310	17.652
3.315	-110.160	3.320	-220.510	3.325	-306.230
3.330	-362.620	3.335	-387.600	3.340	-381.670
3.345	-347.690	3.350	-290.460	3.355	-216.200
3.360	-131.970	3.365	-45.045	3.370	37.649
3.375	110.050	3.380	167.360	3.385	206.320
3.390	225.340	3.395	224.500	3.400	205.410
3.405	170.950	3.410	124.990	3.415	71.963
3.420	16.527	3.425	-36.849	3.430	-84.200
3.435	-122.330	3.440	-149.020	3.445	-163.080
3.450	-164.410	3.455	-153.900	3.460	-133.270
3.465	-104.900	3.470	-71.585	3.475	-36.280
3.480	-1.868	3.485	29.064	3.490	54.394
3.495	72.601	3.500	82.830	3.505	84.910
3.510	79.314	3.515	67.069	3.520	49.639
3.525	28.774	3.530	6.354	3.535	-15.768
3.540	-35.904	3.545	-52.652	3.550	-64.979
3.555	-72.276	3.560	-74.368	3.565	-71.496
3.570	-64.268	3.575	-53.578	3.580	-40.520
3.585	-26.287	3.590	-12.069	3.595	1.038
3.600	12.107	3.605	20.442	3.610	25.611
3.615	27.461	3.620	26.108	3.625	21.904
3.630	15.398	3.635	7.270	3.640	-1.725
3.645	-10.823	3.650	-19.313	3.655	-26.585
3.660	-32.171	3.665	-35.769	3.670	-37.256
3.675	-36.678	3.680	-34.241	3.685	-30.276
3.690	-25.208	3.695	-19.512	3.700	-13.677
3.705	-8.165	3.710	-3.375	3.715	0.380
3.720	2.889	3.725	4.057	3.730	3.897
3.735	2.526	3.740	0.145	3.745	-2.984
3.750	-6.560	3.755	-10.271	3.760	-13.820
3.765	-16.944	3.770	-19.434	3.775	-21.146
3.780	-22.008	3.785	-22.018	3.790	-21.240
3.795	-19.796	3.800	-17.848	3.805	-15.585
3.810	-13.205	3.815	-10.902	3.820	-8.845
3.825	-7.176	3.830	-5.990	3.835	-5.344
3.840	-5.242	3.845	-5.652	3.850	-6.500
3.855	-7.686	3.860	-9.093	3.865	-10.593
3.870	-12.062	3.875	-13.389	3.880	-14.482
3.885	-15.274	3.890	-15.726	3.895	-15.829
3.900	-15.601	3.905	-15.086	3.910	-14.344
3.915	-13.449	3.920	-12.483	3.925	-11.525
3.930	-10.647	3.935	-9.911	3.940	-9.361
3.945	-9.026	3.950	-8.913	3.955	-9.014
3.960	-9.303	3.965	-9.744	3.970	-10.289
3.975	-10.887	3.980	-11.488	3.985	-12.045
3.990	-12.517	3.995	-12.873	4.000	-13.095

801 1.0 FUNCTION 5

0.000	0.000	0.005	-0.051	0.010	-0.050
0.015	-0.055	0.020	-0.067	0.025	-0.085
0.030	-0.110	0.035	-0.140	0.040	-0.176
0.045	-0.216	0.050	-0.261	0.055	-0.311
0.060	-0.366	0.065	-0.426	0.070	-0.488
0.075	-0.554	0.080	-0.622	0.085	-0.693
0.090	-0.765	0.095	-0.838	0.100	-0.913
0.105	-0.990	0.110	-1.068	0.115	-1.148
0.120	-1.230	0.125	-1.313	0.130	-1.397
0.135	-1.483	0.140	-1.571	0.145	-1.661
0.150	-1.752	0.155	-1.845	0.160	-1.939
0.165	-2.036	0.170	-2.133	0.175	-2.233
0.180	-2.334	0.185	-2.436	0.190	-2.540
0.195	-2.646	0.200	-2.753	0.205	-2.861
0.210	-2.971	0.215	-3.082	0.220	-3.194
0.225	-3.307	0.230	-3.421	0.235	-3.536
0.240	-3.651	0.245	-3.768	0.250	-3.885
0.255	-4.002	0.260	-4.120	0.265	-4.238
0.270	-4.357	0.275	-4.476	0.280	-4.596
0.285	-4.715	0.290	-4.836	0.295	-4.956
0.300	-5.077	0.305	-5.198	0.310	-5.320
0.315	-5.443	0.320	-5.566	0.325	-5.689
0.330	-5.814	0.335	-5.939	0.340	-6.065
0.345	-6.193	0.350	-6.321	0.355	-6.450
0.360	-6.581	0.365	-6.713	0.370	-6.846
0.375	-6.980	0.380	-7.116	0.385	-7.253
0.390	-7.391	0.395	-7.531	0.400	-7.672
0.405	-7.814	0.410	-7.958	0.415	-8.102
0.420	-8.247	0.425	-8.394	0.430	-8.541
0.435	-8.689	0.440	-8.837	0.445	-8.987
0.450	-9.136	0.455	-9.286	0.460	-9.437
0.465	-9.588	0.470	-9.739	0.475	-9.890
0.480	-10.041	0.485	-10.193	0.490	-10.345
0.495	-10.497	0.500	-10.649	0.505	-10.801
0.510	-10.953	0.515	-11.106	0.520	-11.259
0.525	-11.412	0.530	-11.565	0.535	-11.719
0.540	-11.874	0.545	-12.028	0.550	-12.184
0.555	-12.340	0.560	-12.497	0.565	-12.654
0.570	-12.812	0.575	-12.971	0.580	-13.131
0.585	-13.292	0.590	-13.453	0.595	-13.616
0.600	-13.779	0.605	-13.944	0.610	-14.110
0.615	-14.276	0.620	-14.444	0.625	-14.613
0.630	-14.783	0.635	-14.954	0.640	-15.127
0.645	-15.301	0.650	-15.476	0.655	-15.652
0.660	-15.830	0.665	-16.009	0.670	-16.189
0.675	-16.371	0.680	-16.555	0.685	-16.740
0.690	-16.927	0.695	-17.116	0.700	-17.306
0.705	-17.498	0.710	-17.692	0.715	-17.888
0.720	-18.086	0.725	-18.286	0.730	-18.489
0.735	-18.693	0.740	-18.900	0.745	-19.109
0.750	-19.320	0.755	-19.534	0.760	-19.750
0.765	-19.968	0.770	-20.189	0.775	-20.413
0.780	-20.639	0.785	-20.867	0.790	-21.098
0.795	-21.332	0.800	-21.568	0.805	-21.807
0.810	-22.048	0.815	-22.292	0.820	-22.539
0.825	-22.788	0.830	-23.040	0.835	-23.294
0.840	-23.551	0.845	-23.811	0.850	-24.073
0.855	-24.338	0.860	-24.606	0.865	-24.876
0.870	-25.149	0.875	-25.425	0.880	-25.704
0.885	-25.985	0.890	-26.270	0.895	-26.557
0.900	-26.847	0.905	-27.140	0.910	-27.436
0.915	-27.735	0.920	-28.037	0.925	-28.342
0.930	-28.650	0.935	-28.962	0.940	-29.276
0.945	-29.594	0.950	-29.916	0.955	-30.240
0.960	-30.568	0.965	-30.900	0.970	-31.235
0.975	-31.574	0.980	-31.916	0.985	-32.261

0.990	-32.611	0.995	-32.964	1.000	-33.320
1.005	-33.681	1.010	-34.045	1.015	-34.413
1.020	-34.785	1.025	-35.161	1.030	-35.541
1.035	-35.925	1.040	-36.313	1.045	-36.705
1.050	-37.102	1.055	-37.502	1.060	-37.907
1.065	-38.316	1.070	-38.729	1.075	-39.147
1.080	-39.569	1.085	-39.996	1.090	-40.427
1.095	-40.863	1.100	-41.303	1.105	-41.749
1.110	-42.199	1.115	-42.654	1.120	-43.113
1.125	-43.578	1.130	-44.048	1.135	-44.523
1.140	-45.003	1.145	-45.489	1.150	-45.979
1.155	-46.475	1.160	-46.977	1.165	-47.484
1.170	-47.996	1.175	-48.514	1.180	-49.038
1.185	-49.567	1.190	-50.103	1.195	-50.644
1.200	-51.191	1.205	-51.744	1.210	-52.303
1.215	-52.868	1.220	-53.439	1.225	-54.017
1.230	-54.601	1.235	-55.192	1.240	-55.789
1.245	-56.393	1.250	-57.003	1.255	-57.621
1.260	-58.245	1.265	-58.876	1.270	-59.514
1.275	-60.160	1.280	-60.812	1.285	-61.473
1.290	-62.140	1.295	-62.816	1.300	-63.499
1.305	-64.190	1.310	-64.889	1.315	-65.596
1.320	-66.311	1.325	-67.035	1.330	-67.767
1.335	-68.507	1.340	-69.257	1.345	-70.015
1.350	-70.782	1.355	-71.559	1.360	-72.344
1.365	-72.140	1.370	-73.944	1.375	-74.759
1.380	-75.583	1.385	-76.417	1.390	-77.262
1.395	-78.117	1.400	-78.982	1.405	-79.858
1.410	-80.745	1.415	-81.643	1.420	-82.552
1.425	-83.473	1.430	-84.404	1.435	-85.348
1.440	-86.304	1.445	-87.271	1.450	-88.251
1.455	-89.244	1.460	-90.249	1.465	-91.267
1.470	-92.298	1.475	-93.343	1.480	-94.401
1.485	-95.472	1.490	-96.558	1.495	-97.658
1.500	-98.772	1.505	-99.902	1.510	-101.050
1.515	-102.200	1.520	-103.380	1.525	-104.570
1.530	-105.780	1.535	-107.000	1.540	-108.240
1.545	-109.490	1.550	-110.770	1.555	-112.060
1.560	-113.360	1.565	-114.690	1.570	-116.030
1.575	-117.400	1.580	-118.780	1.585	-120.180
1.590	-121.600	1.595	-123.040	1.600	-124.500
1.605	-125.980	1.610	-127.480	1.615	-129.000
1.620	-130.550	1.625	-132.110	1.630	-133.700
1.635	-135.310	1.640	-136.950	1.645	-138.610
1.650	-140.290	1.655	-142.000	1.660	-143.730
1.665	-145.490	1.670	-147.270	1.675	-149.080
1.680	-150.910	1.685	-152.780	1.690	-154.670
1.695	-156.590	1.700	-158.540	1.705	-160.510
1.710	-162.520	1.715	-164.560	1.720	-166.630
1.725	-168.730	1.730	-170.860	1.735	-173.020
1.740	-175.220	1.745	-177.450	1.750	-179.720
1.755	-182.020	1.760	-184.360	1.765	-186.730
1.770	-189.150	1.775	-191.600	1.780	-194.090
1.785	-196.610	1.790	-199.180	1.795	-201.790
1.800	-204.440	1.805	-207.140	1.810	-209.880
1.815	-212.660	1.820	-215.480	1.825	-218.360
1.830	-221.280	1.835	-224.250	1.840	-227.260
1.845	-230.330	1.850	-233.450	1.855	-236.620
1.860	-239.840	1.865	-243.120	1.870	-246.450
1.875	-249.840	1.880	-253.290	1.885	-256.790
1.890	-260.360	1.895	-263.980	1.900	-267.670
1.905	-271.420	1.910	-275.240	1.915	-279.120
1.920	-283.070	1.925	-287.090	1.930	-291.180
1.935	-295.340	1.940	-299.580	1.945	-303.890
1.950	-308.280	1.955	-312.740	1.960	-317.290
1.965	-321.920	1.970	-326.630	1.975	-331.430

1.980	-336.310	1.985	-341.280	1.990	-346.350
1.995	-351.510	2.000	-356.760	2.005	-362.110
2.010	-367.560	2.015	-373.110	2.020	-378.770
2.025	-384.530	2.030	-390.400	2.035	-396.380
2.040	-402.480	2.045	-408.690	2.050	-415.020
2.055	-421.470	2.060	-428.050	2.065	-434.760
2.070	-441.590	2.075	-448.560	2.080	-455.660
2.085	-462.910	2.090	-470.300	2.095	-477.830
2.100	-485.510	2.105	-493.350	2.110	-501.340
2.115	-509.500	2.120	-517.820	2.125	-526.310
2.130	-534.970	2.135	-543.800	2.140	-552.820
2.145	-562.030	2.150	-571.420	2.155	-581.010
2.160	-590.800	2.165	-600.790	2.170	-610.990
2.175	-621.410	2.180	-632.040	2.185	-642.910
2.190	-654.000	2.195	-665.330	2.200	-676.910
2.205	-688.730	2.210	-700.810	2.215	-713.150
2.220	-725.760	2.225	-738.650	2.230	-751.820
2.235	-765.280	2.240	-779.030	2.245	-793.100
2.250	-807.470	2.255	-822.170	2.260	-837.200
2.265	-852.570	2.270	-868.280	2.275	-884.360
2.280	-900.800	2.285	-917.620	2.290	-934.820
2.295	-952.420	2.300	-970.430	2.305	-988.860
2.310	-1007.700	2.315	-1027.000	2.320	-1046.800
2.325	-1067.000	2.330	-1087.700	2.335	-1108.900
2.340	-1130.600	2.345	-1152.800	2.350	-1175.600
2.355	-1198.900	2.360	-1222.800	2.365	-1247.200
2.370	-1272.300	2.375	-1298.000	2.380	-1324.300
2.385	-1351.200	2.390	-1378.800	2.395	-1407.200
2.400	-1436.200	2.405	-1465.900	2.410	-1496.400
2.415	-1527.700	2.420	-1559.800	2.425	-1592.700
2.430	-1626.400	2.435	-1661.000	2.440	-1696.500
2.445	-1732.900	2.450	-1770.200	2.455	-1808.600
2.460	-1847.900	2.465	-1888.200	2.470	-1929.700
2.475	-1972.200	2.480	-2015.800	2.485	-2060.600
2.490	-2106.600	2.495	-2153.800	2.500	-2202.300
2.505	-2252.100	2.510	-2303.300	2.515	-2355.800
2.520	-2409.800	2.525	-2465.200	2.530	-2522.200
2.535	-2580.700	2.540	-2640.800	2.545	-2702.600
2.550	-2766.100	2.555	-2831.400	2.560	-2898.500
2.565	-2967.400	2.570	-3038.300	2.575	-3111.200
2.580	-3186.100	2.585	-3263.100	2.590	-3342.300
2.595	-3423.800	2.600	-3507.600	2.605	-3593.700
2.610	-3682.300	2.615	-3773.400	2.620	-3867.100
2.625	-3963.600	2.630	-4062.700	2.635	-4164.800
2.640	-4269.700	2.645	-4377.700	2.650	-4488.800
2.655	-4603.100	2.660	-4720.600	2.665	-4841.600
2.670	-4966.100	2.675	-5094.200	2.680	-5226.000
2.685	-5361.500	2.690	-5501.000	2.695	-5644.600
2.700	-5792.300	2.705	-5944.200	2.710	-6100.500
2.715	-6261.300	2.720	-6426.800	2.725	-6596.900
2.730	-6772.000	2.735	-6952.000	2.740	-7137.200
2.745	-7327.700	2.750	-7523.600	2.755	-7724.900
2.760	-7932.000	2.765	-8144.900	2.770	-8363.700
2.775	-8588.600	2.780	-8819.700	2.785	-9057.200
2.790	-9301.200	2.795	-9551.800	2.800	-9809.200
2.805	-10074.000	2.810	-10345.000	2.815	-10623.000
2.820	-10909.000	2.825	-11203.000	2.830	-11503.000
2.835	-11812.000	2.840	-12128.000	2.845	-12452.000
2.850	-12784.000	2.855	-13124.000	2.860	-13473.000
2.865	-13829.000	2.870	-14194.000	2.875	-14567.000
2.880	-14949.000	2.885	-15339.000	2.890	-15738.000
2.895	-16145.000	2.900	-16560.000	2.905	-16984.000
2.910	-17417.000	2.915	-17857.000	2.920	-18306.000
2.925	-18763.000	2.930	-19229.000	2.935	-19702.000
2.940	-20182.000	2.945	-20671.000	2.950	-21166.000
2.955	-21668.000	2.960	-22177.000	2.965	-22691.000

2.970	-23209.000	2.975	-23730.000	2.980	-24251.000
2.985	-24766.000	2.990	-25266.000	2.995	-25719.000
3.000	-26013.000	3.005	-25278.000	3.010	-21373.000
3.015	-15590.000	3.020	-9778.400	3.025	-4793.800
3.030	-662.240	3.035	2897.100	3.040	6091.400
3.045	8903.900	3.050	11129.000	3.055	12502.000
3.060	12828.000	3.065	12061.000	3.070	10314.000
3.075	7823.700	3.080	4887.800	3.085	1810.800
3.090	-1136.600	3.095	-3735.700	3.100	-5825.100
3.105	-7298.1[illegible]	3.110	-8099.600	3.115	-8223.700
3.120	-7211.[illegible]	3.125	-6647.000	3.130	-5150.900
3.135	-3369.[illegible]	3.140	-1463.100	3.145	411.140
3.150	2108.900	3.155	3511.500	3.160	4532.800
3.165	5123.500	3.170	5271.900	3.175	5001.200
3.180	4365.200	3.185	3441.600	3.190	2324.000
3.195	1113.900	3.200	-88.396	3.205	-1190.500
3.210	-2115.300	3.215	-2804.900	3.220	-3224.400
3.225	-3362.200	3.230	-3229.600	3.235	-2857.700
3.240	-2293.700	3.245	-1596.200	3.250	-829.420
3.255	-57.973	3.260	658.130	3.265	1267.800
3.270	1732.200	3.275	2026.700	3.280	2141.700
3.285	2082.200	3.290	1866.500	3.295	1523.200
3.300	1088.900	3.305	604.160	3.310	110.360
3.315	-353.640	3.320	-754.310	3.325	-1065.600
3.330	-1270.400	3.335	-1361.200	3.340	-1339.800
3.345	-1216.500	3.350	-1008.700	3.355	-739.110
3.360	-433.300	3.365	-117.730	3.370	182.470
3.375	445.280	3.380	653.290	3.385	794.680
3.390	863.680	3.395	860.580	3.400	791.220
3.405	666.090	3.410	499.200	3.415	306.690
3.420	105.410	3.425	-88.396	3.430	-260.330
3.435	-398.820	3.440	-495.740	3.445	-546.840
3.450	-551.720	3.455	-513.580	3.460	-438.720
3.465	-335.760	3.470	-214.840	3.475	-86.690
3.480	38.214	3.485	150.480	3.490	242.400
3.495	308.460	3.500	345.560	3.505	353.080
3.510	332.730	3.515	288.240	3.520	224.930
3.525	149.150	3.530	57.725	3.535	-12.618
3.540	-85.753	3.545	-146.590	3.550	-191.380
3.555	-217.900	3.560	-225.530	3.565	-215.140
3.570	-188.930	3.575	-150.150	3.580	-102.780
3.585	-51.140	3.590	0.448	3.595	47.999
3.600	88.152	3.605	118.380	3.610	137.110
3.615	143.800	3.620	138.850	3.625	123.560
3.630	99.903	3.635	70.363	3.640	37.677
3.645	4.615	3.650	-26.239	3.655	-52.671
3.660	-72.984	3.665	-86.080	3.670	-91.509
3.675	-89.4[illegible]5	3.680	-80.630	3.685	-66.267
3.690	-47.897	3.695	-27.251	3.700	-6.100
3.705	13.881	3.710	31.240	3.715	44.838
3.720	53.917	3.725	58.124	3.730	57.514
3.735	52.506	3.740	43.829	3.745	32.438
3.750	19.424	3.755	5.919	3.760	-6.997
3.765	-18.369	3.770	-27.440	3.775	-33.687
3.780	-36.847	3.785	-36.913	3.790	-34.122
3.795	-28.911	3.800	-21.869	3.805	-13.684
3.810	-5.076	3.815	3.256	3.820	10.691
3.825	16.722	3.830	20.994	3.835	23.312
3.840	23.648	3.845	22.131	3.850	19.022
3.855	14.683	3.860	9.547	3.865	4.071
3.870	-1.295	3.875	-6.144	3.880	-10.143
3.885	-13.047	3.890	-14.718	3.895	-15.122
3.900	-14.326	3.905	-12.485	3.910	-9.822
3.915	-6.606	3.920	-3.129	3.925	0.320
3.930	3.477	3.935	6.120	3.940	8.085
3.945	9.273	3.950	9.652	3.955	9.256

3.960	8.176	3.965	6.547	3.970	4.539
3.975	2.336	3.980	0.123	3.985	-1.928
3.990	-3.671	3.995	-4.994	4.000	-5.830

801 1.0 FUNCTION 6

0.000	0.000	0.005	-0.028	0.010	-0.030
0.015	-0.041	0.020	-0.056	0.025	-0.073
0.030	-0.090	0.035	-0.108	0.040	-0.127
0.045	-0.148	0.050	-0.170	0.055	-0.194
0.060	-0.221	0.065	-0.249	0.070	-0.280
0.075	-0.314	0.080	-0.349	0.085	-0.387
0.090	-0.426	0.095	-0.466	0.100	-0.508
0.105	-0.550	0.110	-0.594	0.115	-0.638
0.120	-0.684	0.125	-0.730	0.130	-0.777
0.135	-0.825	0.140	-0.874	0.145	-0.924
0.150	-0.975	0.155	-1.026	0.160	-1.079
0.165	-1.132	0.170	-1.186	0.175	-1.241
0.180	-1.297	0.185	-1.354	0.190	-1.412
0.195	-1.470	0.200	-1.529	0.205	-1.589
0.210	-1.650	0.215	-1.711	0.220	-1.773
0.225	-1.835	0.230	-1.898	0.235	-1.961
0.240	-2.025	0.245	-2.089	0.250	-2.153
0.255	-2.218	0.260	-2.283	0.265	-2.349
0.270	-2.415	0.275	-2.481	0.280	-2.547
0.285	-2.613	0.290	-2.680	0.295	-2.747
0.300	-2.815	0.305	-2.882	0.310	-2.950
0.315	-3.019	0.320	-3.087	0.325	-3.156
0.330	-3.226	0.335	-3.296	0.340	-3.367
0.345	-3.438	0.350	-3.509	0.355	-3.582
0.360	-3.654	0.365	-3.728	0.370	-3.802
0.375	-3.877	0.380	-3.952	0.385	-4.029
0.390	-4.105	0.395	-4.183	0.400	-4.261
0.405	-4.340	0.410	-4.419	0.415	-4.499
0.420	-4.579	0.425	-4.660	0.430	-4.741
0.435	-4.823	0.440	-4.905	0.445	-4.987
0.450	-5.070	0.455	-5.153	0.460	-5.236
0.465	-5.320	0.470	-5.403	0.475	-5.487
0.480	-5.571	0.485	-5.655	0.490	-5.739
0.495	-5.823	0.500	-5.908	0.505	-5.992
0.510	-6.077	0.515	-6.162	0.520	-6.247
0.525	-6.332	0.530	-6.418	0.535	-6.504
0.540	-6.590	0.545	-6.676	0.550	-6.763
0.555	-6.850	0.560	-6.937	0.565	-7.024
0.570	-7.113	0.575	-7.201	0.580	-7.290
0.585	-7.379	0.590	-7.469	0.595	-7.560
0.600	-7.651	0.605	-7.742	0.610	-7.834
0.615	-7.927	0.620	-8.020	0.625	-8.114
0.630	-8.209	0.635	-8.304	0.640	-8.400
0.645	-8.497	0.650	-8.594	0.655	-8.692
0.660	-8.791	0.665	-8.891	0.670	-8.991
0.675	-9.093	0.680	-9.195	0.685	-9.298
0.690	-9.402	0.695	-9.507	0.700	-9.613
0.705	-9.720	0.710	-9.828	0.715	-9.937
0.720	-10.047	0.725	-10.159	0.730	-10.272
0.735	-10.385	0.740	-10.500	0.745	-10.617
0.750	-10.734	0.755	-10.853	0.760	-10.973
0.765	-11.095	0.770	-11.218	0.775	-11.342
0.780	-11.467	0.785	-11.594	0.790	-11.723
0.795	-11.852	0.800	-11.984	0.805	-12.116
0.810	-12.250	0.815	-12.386	0.820	-12.523
0.825	-12.661	0.830	-12.801	0.835	-12.942
0.840	-13.085	0.845	-13.229	0.850	-13.375
0.855	-13.522	0.860	-13.671	0.865	-13.821
0.870	-13.973	0.875	-14.126	0.880	-14.281
0.885	-14.437	0.890	-14.595	0.895	-14.755
0.900	-14.916	0.905	-15.079	0.910	-15.243
0.915	-15.410	0.920	-15.578	0.925	-15.747

0.930	-15.919	0.935	-16.092	0.940	-16.267
0.945	-16.443	0.950	-16.622	0.955	-16.803
0.960	-16.985	0.965	-17.169	0.970	-17.355
0.975	-17.544	0.980	-17.734	0.985	-17.926
0.990	-18.120	0.995	-18.316	1.000	-18.514
1.005	-18.715	1.010	-18.917	1.015	-19.122
1.020	-19.329	1.025	-19.537	1.030	-19.749
1.035	-19.962	1.040	-20.178	1.045	-20.395
1.050	-20.616	1.055	-20.838	1.060	-21.063
1.065	-21.290	1.070	-21.520	1.075	-21.752
1.080	-21.987	1.085	-22.224	1.090	-22.464
1.095	-22.706	1.100	-22.951	1.105	-23.198
1.110	-23.449	1.115	-23.701	1.120	-23.957
1.125	-24.215	1.130	-24.477	1.135	-24.741
1.140	-25.007	1.145	-25.277	1.150	-25.550
1.155	-25.825	1.160	-26.104	1.165	-26.386
1.170	-26.671	1.175	-26.958	1.180	-27.249
1.185	-27.544	1.190	-27.841	1.195	-28.142
1.200	-28.446	1.205	-28.753	1.210	-29.064
1.215	-29.378	1.220	-29.695	1.225	-30.016
1.230	-30.341	1.235	-30.669	1.240	-31.001
1.245	-31.337	1.250	-31.676	1.255	-32.019
1.260	-32.366	1.265	-32.717	1.270	-33.071
1.275	-33.430	1.280	-33.793	1.285	-34.160
1.290	-34.531	1.295	-34.906	1.300	-35.286
1.305	-35.670	1.310	-36.059	1.315	-36.452
1.320	-36.849	1.325	-37.251	1.330	-37.658
1.335	-38.070	1.340	-38.487	1.345	-38.908
1.350	-39.335	1.355	-39.766	1.360	-40.203
1.365	-40.645	1.370	-41.092	1.375	-41.545
1.380	-42.003	1.385	-42.467	1.390	-42.936
1.395	-43.412	1.400	-43.893	1.405	-44.379
1.410	-44.872	1.415	-45.372	1.420	-45.877
1.425	-46.388	1.430	-46.906	1.435	-47.431
1.440	-47.962	1.445	-48.500	1.450	-49.045
1.455	-49.596	1.460	-50.155	1.465	-50.721
1.470	-51.294	1.475	-51.875	1.480	-52.463
1.485	-53.059	1.490	-53.662	1.495	-54.274
1.500	-54.893	1.505	-55.521	1.510	-56.157
1.515	-56.801	1.520	-57.454	1.525	-58.116
1.530	-58.786	1.535	-59.466	1.540	-60.155
1.545	-60.853	1.550	-61.560	1.555	-62.277
1.560	-63.004	1.565	-63.741	1.570	-64.488
1.575	-65.246	1.580	-66.014	1.585	-66.792
1.590	-67.582	1.595	-68.382	1.600	-69.194
1.605	-70.017	1.610	-70.851	1.615	-71.698
1.620	-72.556	1.625	-73.427	1.630	-74.310
1.635	-75.206	1.640	-76.115	1.645	-77.037
1.650	-77.972	1.655	-78.921	1.660	-79.884
1.665	-80.861	1.670	-81.852	1.675	-82.850
1.680	-83.879	1.685	-84.914	1.690	-85.966
1.695	-87.033	1.700	-88.116	1.705	-89.215
1.710	-90.331	1.715	-91.463	1.720	-92.613
1.725	-93.781	1.730	-94.966	1.735	-96.170
1.740	-97.392	1.745	-98.633	1.750	-99.893
1.755	-101.170	1.760	-102.470	1.765	-103.790
1.770	-105.130	1.775	-106.500	1.780	-107.880
1.785	-109.290	1.790	-110.710	1.795	-112.160
1.800	-113.640	1.805	-115.140	1.810	-116.660
1.815	-118.210	1.820	-119.780	1.825	-121.370
1.830	-123.000	1.835	-124.650	1.840	-126.330
1.845	-128.030	1.850	-129.770	1.855	-131.530
1.860	-133.320	1.865	-135.140	1.870	-137.000
1.875	-138.880	1.880	-140.800	1.885	-142.750
1.890	-144.730	1.895	-146.740	1.900	-148.790
1.905	-150.880	1.910	-153.000	1.915	-155.160

1.920	-157.360	1.925	-159.590	1.930	-161.870
1.935	-164.180	1.940	-166.540	1.945	-168.930
1.950	-171.370	1.955	-173.860	1.960	-176.390
1.965	-178.960	1.970	-181.580	1.975	-184.250
1.980	-186.960	1.985	-189.730	1.990	-192.550
1.995	-195.420	2.000	-198.340	2.005	-201.310
2.010	-204.340	2.015	-207.430	2.020	-210.580
2.025	-213.780	2.030	-217.050	2.035	-220.370
2.040	-223.770	2.045	-227.220	2.050	-230.740
2.055	-234.330	2.060	-237.990	2.065	-241.720
2.070	-245.520	2.075	-249.400	2.080	-253.350
2.085	-257.380	2.090	-261.490	2.095	-265.680
2.100	-269.950	2.105	-274.310	2.110	-278.760
2.115	-283.300	2.120	-287.920	2.125	-292.650
2.130	-297.460	2.135	-302.380	2.140	-307.400
2.145	-312.520	2.150	-317.740	2.155	-323.080
2.160	-328.520	2.165	-334.080	2.170	-339.760
2.175	-345.560	2.180	-351.470	2.185	-357.520
2.190	-363.690	2.195	-370.000	2.200	-376.440
2.205	-383.010	2.210	-389.740	2.215	-396.600
2.220	-403.620	2.225	-410.790	2.230	-418.120
2.235	-425.610	2.240	-433.260	2.245	-441.090
2.250	-449.090	2.255	-457.270	2.260	-465.640
2.265	-474.190	2.270	-482.930	2.275	-491.880
2.280	-501.030	2.285	-510.390	2.290	-519.970
2.295	-529.760	2.300	-539.790	2.305	-550.040
2.310	-560.540	2.315	-571.290	2.320	-582.280
2.325	-593.540	2.330	-605.060	2.335	-616.860
2.340	-628.950	2.345	-641.320	2.350	-653.990
2.355	-666.960	2.360	-680.260	2.365	-693.870
2.370	-707.820	2.375	-722.120	2.380	-736.760
2.385	-751.770	2.390	-767.150	2.395	-782.920
2.400	-799.080	2.405	-815.640	2.410	-832.630
2.415	-850.040	2.420	-867.900	2.425	-886.210
2.430	-904.990	2.435	-924.260	2.440	-944.020
2.445	-964.290	2.450	-985.090	2.455	-1006.400
2.460	-1028.300	2.465	-1050.800	2.470	-1073.900
2.475	-1097.600	2.480	-1121.900	2.485	-1146.800
2.490	-1172.400	2.495	-1198.700	2.500	-1225.700
2.505	-1253.500	2.510	-1282.000	2.515	-1311.200
2.520	-1341.300	2.525	-1372.200	2.530	-1403.900
2.535	-1436.500	2.540	-1470.000	2.545	-1504.400
2.550	-1539.800	2.555	-1576.100	2.560	-1613.500
2.565	-1651.900	2.570	-1691.400	2.575	-1732.000
2.580	-1773.700	2.585	-1816.600	2.590	-1860.700
2.595	-1906.100	2.600	-1952.700	2.605	-2000.700
2.610	-2050.100	2.615	-2100.800	2.620	-2153.000
2.625	-2206.700	2.630	-2262.000	2.635	-2318.800
2.640	-2377.300	2.645	-2437.400	2.650	-2499.300
2.655	-2562.900	2.660	-2628.400	2.665	-2695.800
2.670	-2765.100	2.675	-2836.400	2.680	-2909.800
2.685	-2985.300	2.690	-3062.900	2.695	-3142.800
2.700	-3225.100	2.705	-3309.600	2.710	-3396.700
2.715	-3486.200	2.720	-3578.200	2.725	-3673.000
2.730	-3770.400	2.735	-3870.600	2.740	-3973.600
2.745	-4079.600	2.750	-4188.600	2.755	-4300.600
2.760	-4415.800	2.765	-4534.200	2.770	-4655.900
2.775	-4780.900	2.780	-4909.500	2.785	-5041.500
2.790	-5177.100	2.795	-5316.400	2.800	-5459.500
2.805	-5606.400	2.810	-5757.100	2.815	-5911.900
2.820	-6070.600	2.825	-6233.500	2.830	-6400.500
2.835	-6571.800	2.840	-6747.400	2.845	-6927.300
2.850	-7111.600	2.855	-7300.400	2.860	-7493.600
2.865	-7691.400	2.870	-7893.700	2.875	-8100.700
2.880	-8312.300	2.885	-8528.500	2.890	-8749.400
2.895	-8974.900	2.900	-9205.000	2.905	-9439.800

2.910	-9679.300	2.915	-9923.200	2.920	-10172.000
2.925	-10425.000	2.930	-10682.000	2.935	-10944.000
2.940	-11209.000	2.945	-11479.000	2.950	-11753.000
2.955	-12030.000	2.960	-12310.000	2.965	-12593.000
2.970	-12877.000	2.975	-13161.000	2.980	-13443.000
2.985	-13715.000	2.990	-13962.000	2.995	-14134.000
3.000	-14012.000	3.005	-11599.000	3.010	-3967.400
3.015	-914.100	3.020	-35.021	3.025	224.760
3.030	330.840	3.035	399.320	3.040	469.800
3.045	554.650	3.050	643.120	3.055	710.000
3.060	729.710	3.065	687.740	3.070	585.150
3.075	436.230	3.080	262.340	3.085	85.279
3.090	-77.274	3.095	-213.510	3.100	-316.940
3.105	-384.870	3.110	-416.940	3.115	-414.330
3.120	-379.620	3.125	-317.050	3.130	-232.630
3.135	-133.980	3.140	-29.797	3.145	70.998
3.150	160.100	3.155	230.600	3.160	277.520
3.165	298.150	3.170	292.030	3.175	260.890
3.180	208.300	3.185	139.290	3.190	59.855
3.195	-23.525	3.200	-104.460	3.205	-177.110
3.210	-236.660	3.215	-279.610	3.220	-304.000
3.225	-309.480	3.230	-297.220	3.235	-269.740
3.240	-230.590	3.245	-184.000	3.250	-134.470
3.255	-86.345	3.260	-43.456	3.265	-8.772
3.270	15.811	3.275	29.606	3.280	33.141
3.285	28.022	3.290	16.698	3.295	2.123
3.300	-12.617	3.305	-24.678	3.310	-31.784
3.315	-32.457	3.320	-26.120	3.325	-13.090
3.330	5.556	3.335	28.181	3.340	52.834
3.345	77.499	3.350	100.300	3.355	119.660
3.360	134.380	3.365	143.680	3.370	147.190
3.375	144.910	3.380	137.130	3.385	124.360
3.390	107.290	3.395	86.745	3.400	63.679
3.405	39.109	3.410	14.103	3.415	-10.267
3.420	-32.968	3.425	-53.054	3.430	-69.719
3.435	-82.342	3.440	-90.526	3.445	-94.115
3.450	-93.211	3.455	-88.151	3.460	-79.486
3.465	-67.932	3.470	-54.317	3.475	-39.522
3.480	-24.414	3.485	-9.798	3.490	3.637
3.495	15.348	3.500	24.959	3.505	32.271
3.510	37.246	3.515	39.997	3.520	40.755
3.525	39.839	3.530	37.620	3.535	34.488
3.540	30.819	3.545	26.950	3.550	23.162
3.555	19.662	3.560	16.582	3.565	13.974
3.570	11.824	3.575	10.057	3.580	8.551
3.585	7.160	3.590	5.722	3.595	4.083
3.600	2.109	3.605	-0.302	3.610	-3.212
3.615	-6.633	3.620	-10.529	3.625	-14.818
3.630	-19.375	3.635	-24.043	3.640	-28.642
3.645	-32.978	3.650	-36.862	3.655	-40.115
3.660	-42.583	3.665	-44.145	3.670	-44.716
3.675	-44.259	3.680	-42.776	3.685	-40.316
3.690	-36.963	3.695	-32.836	3.700	-28.078
3.705	-22.853	3.710	-17.329	3.715	-11.679
3.720	-6.066	3.725	-0.640	3.730	4.465
3.735	9.137	3.740	13.287	3.745	16.851
3.750	19.784	3.755	22.064	3.760	23.689
3.765	24.669	3.770	25.030	3.775	24.806
3.780	24.040	3.785	22.782	3.790	21.085
3.795	19.005	3.800	16.601	3.805	13.936
3.810	11.073	3.815	8.078	3.820	5.018
3.825	1.963	3.830	-1.020	3.835	-3.862
3.840	-6.497	3.845	-8.866	3.850	-10.913
3.855	-12.591	3.860	-13.863	3.865	-14.704
3.870	-15.100	3.875	-15.053	3.880	-14.575
3.885	-13.694	3.890	-12.447	3.895	-10.885

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3.900      -9.065      3.905      -7.050      3.910      -4.907
3.915      -2.703      3.920      -0.506      3.925       1.624
3.930       3.630      3.935       5.465      3.940       7.087
3.945       8.469      3.950       9.588      3.955      10.435
3.960      11.005      3.965      11.304      3.970      11.342
3.975      11.137      3.980      10.706      3.985      10.073
3.990       9.261      3.995       8.293      4.000       7.193
801     1.0     FUNCTION 7
0.000       0.000      0.005      -0.016      0.010      -0.017
0.015      -0.020      0.020      -0.027      0.025      -0.035
0.030      -0.045      0.035      -0.056      0.040      -0.067
0.045      -0.079      0.050      -0.092      0.055      -0.105
0.060      -0.120      0.065      -0.135      0.070      -0.152
0.075      -0.171      0.080      -0.191      0.085      -0.212
0.090      -0.234      0.095      -0.257      0.100      -0.282
0.105      -0.307      0.110      -0.333      0.115      -0.359
0.120      -0.386      0.125      -0.413      0.130      -0.441
0.135      -0.470      0.140      -0.499      0.145      -0.528
0.150      -0.558      0.155      -0.589      0.160      -0.620
0.165      -0.651      0.170      -0.683      0.175      -0.716
0.180      -0.749      0.185      -0.782      0.190      -0.817
0.195      -0.851      0.200      -0.886      0.205      -0.921
0.210      -0.957      0.215      -0.993      0.220      -1.029
0.225      -1.066      0.230      -1.103      0.235      -1.140
0.240      -1.178      0.245      -1.215      0.250      -1.253
0.255      -1.291      0.260      -1.330      0.265      -1.369
0.270      -1.407      0.275      -1.446      0.280      -1.486
0.285      -1.525      0.290      -1.564      0.295      -1.604
0.300      -1.644      0.305      -1.684      0.310      -1.725
0.315      -1.765      0.320      -1.806      0.325      -1.847
0.330      -1.888      0.335      -1.930      0.340      -1.972
0.345      -2.014      0.350      -2.057      0.355      -2.100
0.360      -2.143      0.365      -2.187      0.370      -2.231
0.375      -2.275      0.380      -2.320      0.385      -2.365
0.390      -2.410      0.395      -2.456      0.400      -2.502
0.405      -2.549      0.410      -2.596      0.415      -2.643
0.420      -2.690      0.425      -2.738      0.430      -2.785
0.435      -2.833      0.440      -2.882      0.445      -2.930
0.450      -2.979      0.455      -3.028      0.460      -3.077
0.465      -3.126      0.470      -3.175      0.475      -3.225
0.480      -3.274      0.485      -3.324      0.490      -3.374
0.495      -3.424      0.500      -3.473      0.505      -3.524
0.510      -3.574      0.515      -3.624      0.520      -3.674
0.525      -3.725      0.530      -3.775      0.535      -3.826
0.540      -3.877      0.545      -3.928      0.550      -3.980
0.555      -4.031      0.560      -4.083      0.565      -4.135
0.570      -4.187      0.575      -4.239      0.580      -4.292
0.585      -4.345      0.590      -4.398      0.595      -4.451
0.600      -4.505      0.605      -4.559      0.610      -4.614
0.615      -4.669      0.620      -4.724      0.625      -4.779
0.630      -4.835      0.635      -4.892      0.640      -4.948
0.645      -5.005      0.650      -5.063      0.655      -5.121
0.660      -5.179      0.665      -5.238      0.670      -5.298
0.675      -5.358      0.680      -5.418      0.685      -5.479
0.690      -5.541      0.695      -5.603      0.700      -5.666
0.705      -5.729      0.710      -5.793      0.715      -5.858
0.720      -5.923      0.725      -5.989      0.730      -6.055
0.735      -6.123      0.740      -6.191      0.745      -6.260
0.750      -6.329      0.755      -6.399      0.760      -6.470
0.765      -6.542      0.770      -6.615      0.775      -6.688
0.780      -6.762      0.785      -6.837      0.790      -6.913
0.795      -6.990      0.800      -7.067      0.805      -7.146
0.810      -7.225      0.815      -7.305      0.820      -7.386
0.825      -7.467      0.830      -7.550      0.835      -7.633
0.840      -7.718      0.845      -7.803      0.850      -7.889
0.855      -7.976      0.860      -8.064      0.865      -8.152
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0.870	-8.242	0.875	-8.333	0.880	-8.424
0.885	-8.517	0.890	-8.610	0.895	-8.704
0.900	-8.800	0.905	-8.896	0.910	-8.993
0.915	-9.091	0.920	-9.190	0.925	-9.291
0.930	-9.392	0.935	-9.494	0.940	-9.598
0.945	-9.702	0.950	-9.808	0.955	-9.914
0.960	-10.022	0.965	-10.131	0.970	-10.241
0.975	-10.352	0.980	-10.464	0.985	-10.578
0.990	-10.693	0.995	-10.809	1.000	-10.926
1.005	-11.044	1.010	-11.164	1.015	-11.284
1.020	-11.407	1.025	-11.530	1.030	-11.655
1.035	-11.781	1.040	-11.908	1.045	-12.037
1.050	-12.167	1.055	-12.298	1.060	-12.431
1.065	-12.565	1.070	-12.701	1.075	-12.838
1.080	-12.977	1.085	-13.117	1.090	-13.258
1.095	-13.402	1.100	-13.546	1.105	-13.692
1.110	-13.840	1.115	-13.989	1.120	-14.140
1.125	-14.293	1.130	-14.447	1.135	-14.603
1.140	-14.761	1.145	-14.920	1.150	-15.081
1.155	-15.244	1.160	-15.408	1.165	-15.574
1.170	-15.743	1.175	-15.913	1.180	-16.084
1.185	-16.258	1.190	-16.434	1.195	-16.611
1.200	-16.790	1.205	-16.972	1.210	-17.155
1.215	-17.341	1.220	-17.528	1.225	-17.717
1.230	-17.909	1.235	-18.103	1.240	-18.299
1.245	-18.497	1.250	-18.697	1.255	-18.899
1.260	-19.104	1.265	-19.311	1.270	-19.520
1.275	-19.732	1.280	-19.946	1.285	-20.163
1.290	-20.382	1.295	-20.603	1.300	-20.827
1.305	-21.054	1.310	-21.283	1.315	-21.515
1.320	-21.749	1.325	-21.987	1.330	-22.227
1.335	-22.470	1.340	-22.715	1.345	-22.964
1.350	-23.215	1.355	-23.470	1.360	-23.728
1.365	-23.988	1.370	-24.252	1.375	-24.519
1.380	-24.789	1.385	-25.063	1.390	-25.340
1.395	-25.620	1.400	-25.903	1.405	-26.191
1.410	-26.481	1.415	-26.775	1.420	-27.073
1.425	-27.375	1.430	-27.680	1.435	-27.990
1.440	-28.303	1.445	-28.620	1.450	-28.941
1.455	-29.266	1.460	-29.595	1.465	-29.929
1.470	-30.267	1.475	-30.609	1.480	-30.955
1.485	-31.307	1.490	-31.662	1.495	-32.023
1.500	-32.388	1.505	-32.757	1.510	-33.132
1.515	-33.512	1.520	-33.896	1.525	-34.286
1.530	-34.681	1.535	-35.082	1.540	-35.487
1.545	-35.899	1.550	-36.315	1.555	-36.738
1.560	-37.166	1.565	-37.600	1.570	-38.040
1.575	-38.486	1.580	-38.938	1.585	-39.397
1.590	-39.861	1.595	-40.333	1.600	-40.811
1.605	-41.295	1.610	-41.787	1.615	-42.285
1.620	-42.790	1.625	-43.303	1.630	-43.823
1.635	-44.350	1.640	-44.885	1.645	-45.428
1.650	-45.978	1.655	-46.537	1.660	-47.103
1.665	-47.678	1.670	-48.261	1.675	-48.853
1.680	-49.454	1.685	-50.063	1.690	-50.682
1.695	-51.310	1.700	-51.947	1.705	-52.593
1.710	-53.250	1.715	-53.916	1.720	-54.593
1.725	-55.279	1.730	-55.977	1.735	-56.684
1.740	-57.403	1.745	-58.133	1.750	-58.874
1.755	-59.627	1.760	-60.391	1.765	-61.167
1.770	-61.956	1.775	-62.756	1.780	-63.570
1.785	-64.396	1.790	-65.236	1.795	-66.089
1.800	-66.955	1.805	-67.835	1.810	-68.730
1.815	-69.639	1.820	-70.563	1.825	-71.502
1.830	-72.456	1.835	-73.426	1.840	-74.411
1.845	-75.413	1.850	-76.432	1.855	-77.467

1.860	-78.520	1.865	-79.591	1.870	-80.679
1.875	-81.786	1.880	-82.911	1.885	-84.056
1.890	-85.220	1.895	-86.403	1.900	-87.608
1.905	-88.832	1.910	-90.078	1.915	-91.346
1.920	-92.636	1.925	-93.948	1.930	-95.283
1.935	-96.642	1.940	-98.024	1.945	-99.431
1.950	-100.860	1.955	-102.320	1.960	-103.800
1.965	-105.310	1.970	-106.850	1.975	-108.420
1.980	-110.010	1.985	-111.630	1.990	-113.290
1.995	-114.970	2.000	-116.680	2.005	-118.430
2.010	-120.210	2.015	-122.020	2.020	-123.860
2.025	-125.740	2.030	-127.650	2.035	-129.610
2.040	-131.590	2.045	-133.620	2.050	-135.680
2.055	-137.790	2.060	-139.930	2.065	-142.120
2.070	-144.350	2.075	-146.620	2.080	-148.930
2.085	-151.290	2.090	-153.700	2.095	-156.160
2.100	-158.660	2.105	-161.210	2.110	-163.820
2.115	-166.480	2.120	-169.190	2.125	-171.950
2.130	-174.770	2.135	-177.650	2.140	-180.590
2.145	-183.590	2.150	-186.650	2.155	-189.770
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2.190	-213.540	2.195	-217.230	2.200	-221.000
2.205	-224.850	2.210	-228.780	2.215	-232.790
2.220	-236.900	2.225	-241.090	2.230	-245.380
2.235	-249.760	2.240	-254.230	2.245	-258.810
2.250	-263.490	2.255	-268.270	2.260	-273.160
2.265	-278.160	2.270	-283.270	2.275	-288.500
2.280	-293.850	2.285	-299.320	2.290	-304.910
2.295	-310.630	2.300	-316.490	2.305	-322.480
2.310	-328.610	2.315	-334.890	2.320	-341.310
2.325	-347.890	2.330	-354.610	2.335	-361.500
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2.355	-390.750	2.360	-398.510	2.365	-406.460
2.370	-414.600	2.375	-422.940	2.380	-431.480
2.385	-440.240	2.390	-449.210	2.395	-458.410
2.400	-467.830	2.405	-477.500	2.410	-487.400
2.415	-497.560	2.420	-507.970	2.425	-518.650
2.430	-529.600	2.435	-540.830	2.440	-552.350
2.445	-564.160	2.450	-576.280	2.455	-588.720
2.460	-601.480	2.465	-614.580	2.470	-628.020
2.475	-641.810	2.480	-655.970	2.485	-670.500
2.490	-685.430	2.495	-700.740	2.500	-716.470
2.505	-732.630	2.510	-749.220	2.515	-766.250
2.520	-783.750	2.525	-801.730	2.530	-820.200
2.535	-839.170	2.540	-858.660	2.545	-878.700
2.550	-899.280	2.555	-920.430	2.560	-942.180
2.565	-964.520	2.570	-987.490	2.575	-1011.100
2.580	-1035.400	2.585	-1060.300	2.590	-1086.000
2.595	-1112.400	2.600	-1139.500	2.605	-1167.400
2.610	-1196.100	2.615	-1225.700	2.620	-1256.000
2.625	-1287.200	2.630	-1319.400	2.635	-1352.400
2.640	-1386.400	2.645	-1421.400	2.650	-1457.300
2.655	-1494.300	2.660	-1532.400	2.665	-1571.600
2.670	-1611.900	2.675	-1653.300	2.680	-1696.000
2.685	-1739.900	2.690	-1785.000	2.695	-1831.500
2.700	-1879.300	2.705	-1928.500	2.710	-1979.100
2.715	-2031.100	2.720	-2084.700	2.725	-2139.800
2.730	-2196.400	2.735	-2254.700	2.740	-2314.600
2.745	-2376.300	2.750	-2439.700	2.755	-2504.900
2.760	-2571.900	2.765	-2640.800	2.770	-2711.600
2.775	-2784.400	2.780	-2859.200	2.785	-2936.100
2.790	-3015.100	2.795	-3096.300	2.800	-3179.600
2.805	-3265.200	2.810	-3353.100	2.815	-3443.300
2.820	-3535.900	2.825	-3630.900	2.830	-3728.300
2.835	-3828.300	2.840	-3930.800	2.845	-4035.800

2.850	-4143.500	2.855	-4253.800	2.860	-4366.700
2.865	-4482.400	2.870	-4600.800	2.875	-4721.900
2.880	-4845.800	2.885	-4972.500	2.890	-5101.900
2.895	-5234.200	2.900	-5369.200	2.905	-5507.000
2.910	-5647.600	2.915	-5791.000	2.920	-5937.100
2.925	-6086.000	2.930	-6237.500	2.935	-6391.700
2.940	-6548.500	2.945	-6707.700	2.950	-6869.300
2.955	-7033.200	2.960	-7199.100	2.965	-7366.900
2.970	-7535.900	2.975	-7705.700	2.980	-7874.900
2.985	-8041.000	2.990	-8198.100	2.995	-8328.600
3.000	-8361.300	3.005	-7712.700	3.010	-5126.500
3.015	-2287.600	3.020	-392.900	3.025	514.040
3.030	779.390	3.035	712.170	3.040	514.520
3.045	302.810	3.050	131.240	3.055	13.000
3.060	-59.524	3.065	-99.391	3.070	-116.610
3.075	-115.960	3.080	-98.638	3.085	-65.224
3.090	-17.938	3.095	38.542	3.100	97.710
3.105	152.700	3.110	197.770	3.115	229.340
3.120	246.210	3.125	249.120	3.130	240.010
3.135	221.230	3.140	194.870	3.145	162.530
3.150	125.250	3.155	83.692	3.160	38.340
3.165	-10.269	3.170	-61.390	3.175	-113.990
3.180	-166.710	3.185	-217.930	3.190	-265.850
3.195	-308.600	3.200	-344.440	3.205	-371.920
3.210	-390.070	3.215	-398.580	3.220	-397.840
3.225	-388.990	3.230	-373.860	3.235	-354.800
3.240	-334.470	3.245	-315.550	3.250	-300.490
3.255	-291.110	3.260	-288.400	3.265	-292.190
3.270	-301.100	3.275	-312.490	3.280	-322.620
3.285	-327.010	3.290	-321.000	3.295	-300.350
3.300	-261.940	3.305	-204.340	3.310	-128.180
3.315	-36.300	3.320	66.505	3.325	173.940
3.330	278.930	3.335	374.440	3.340	454.290
3.345	513.730	3.350	549.900	3.355	561.980
3.360	551.010	3.365	519.590	3.370	471.440
3.375	410.920	3.380	342.450	3.385	270.110
3.390	197.410	3.395	127.170	3.400	61.485
3.405	1.780	3.410	-51.053	3.415	-96.539
3.420	-134.490	3.425	-164.890	3.430	-187.870
3.435	-203.610	3.440	-212.400	3.445	-214.560
3.450	-210.520	3.455	-200.830	3.460	-186.100
3.465	-167.080	3.470	-144.560	3.475	-119.420
3.480	-92.533	3.485	-64.765	3.490	-36.941
3.495	-9.816	3.500	15.940	3.505	39.753
3.510	61.150	3.515	79.755	3.520	95.287
3.525	107.560	3.530	116.460	3.535	121.980
3.540	124.170	3.545	123.160	3.550	119.170
3.555	112.470	3.560	103.370	3.565	92.245
3.570	79.485	3.575	65.488	3.580	50.643
3.585	35.314	3.590	19.825	3.595	4.448
3.600	-10.601	3.605	-25.158	3.610	-39.114
3.615	-52.398	3.620	-64.967	3.625	-76.792
3.630	-87.841	3.635	-98.067	3.640	-107.400
3.645	-115.730	3.650	-122.930	3.655	-128.820
3.660	-133.220	3.665	-135.930	3.670	-136.760
3.675	-135.540	3.680	-132.130	3.685	-126.470
3.690	-118.530	3.695	-108.370	3.700	-96.142
3.705	-82.062	3.710	-66.427	3.715	-49.597
3.720	-31.985	3.725	-14.041	3.730	3.765
3.735	20.961	3.740	37.093	3.745	51.740
3.750	64.535	3.755	75.172	3.760	83.419
3.765	89.125	3.770	92.222	3.775	92.725
3.780	90.727	3.785	86.397	3.790	79.968
3.795	71.722	3.800	61.985	3.805	51.108
3.810	39.458	3.815	27.405	3.820	15.308
3.825	3.507	3.830	-7.688	3.835	-18.001

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3.840     -27.202     3.845     -35.104     3.850     -41.570
3.855     -46.512     3.860     -49.887     3.865     -51.701
3.870     -51.999     3.875     -50.863     3.880     -48.409
3.885     -44.779     3.890     -40.134     3.895     -34.651
3.900     -28.514     3.905     -21.912     3.910     -15.032
3.915      -8.053     3.920      -1.144     3.925       5.537
3.930      11.852     3.935      17.676     3.940      22.907
3.945      27.461     3.950      31.271     3.955      34.292
3.960      36.495     3.965      37.869     3.970      38.416
3.975      38.154     3.980      37.114     3.985      35.337
3.990      32.873     3.995      29.784     4.000      26.136
901       1.0      FUNCTION 8
0.000       0.000     0.005      -0.120     0.010      -0.118
0.015      -0.119     0.020      -0.125     0.025      -0.140
0.030      -0.165     0.035      -0.201     0.040      -0.247
0.045      -0.304     0.050      -0.370     0.055      -0.445
0.060      -0.529     0.065      -0.622     0.070      -0.724
0.075      -0.835     0.080      -0.955     0.085      -1.086
0.090      -1.227     0.095      -1.378     0.100      -1.540
0.105      -1.712     0.110      -1.894     0.115      -2.084
0.120      -2.283     0.125      -2.489     0.130      -2.701
0.135      -2.919     0.140      -3.143     0.145      -3.372
0.150      -3.605     0.155      -3.842     0.160      -4.083
0.165      -4.327     0.170      -4.574     0.175      -4.824
0.180      -5.077     0.185      -5.333     0.190      -5.591
0.195      -5.851     0.200      -6.114     0.205      -6.379
0.210      -6.645     0.215      -6.914     0.220      -7.185
0.225      -7.458     0.230      -7.734     0.235      -8.011
0.240      -8.291     0.245      -8.573     0.250      -8.858
0.255      -9.145     0.260      -9.435     0.265      -9.727
0.270     -10.022     0.275     -10.320     0.280     -10.620
0.285     -10.923     0.290     -11.229     0.295     -11.538
0.300     -11.850     0.305     -12.165     0.310     -12.483
0.315     -12.803     0.320     -13.126     0.325     -13.452
0.330     -13.781     0.335     -14.111     0.340     -14.445
0.345     -14.780     0.350     -15.117     0.355     -15.457
0.360     -15.798     0.365     -16.140     0.370     -16.484
0.375     -16.830     0.380     -17.177     0.385     -17.525
0.390     -17.874     0.395     -18.224     0.400     -18.575
0.405     -18.927     0.410     -19.281     0.415     -19.635
0.420     -19.991     0.425     -20.348     0.430     -20.706
0.435     -21.065     0.440     -21.426     0.445     -21.789
0.450     -22.153     0.455     -22.519     0.460     -22.886
0.465     -23.255     0.470     -23.626     0.475     -23.999
0.480     -24.373     0.485     -24.749     0.490     -25.128
0.495     -25.507     0.500     -25.889     0.505     -26.273
0.510     -26.658     0.515     -27.044     0.520     -27.433
0.525     -27.823     0.530     -28.214     0.535     -28.607
0.540     -29.002     0.545     -29.398     0.550     -29.795
0.555     -30.194     0.560     -30.595     0.565     -30.997
0.570     -31.400     0.575     -31.806     0.580     -32.212
0.585     -32.621     0.590     -33.032     0.595     -33.444
0.600     -33.859     0.605     -34.276     0.610     -34.696
0.615     -35.118     0.620     -35.542     0.625     -35.970
0.630     -36.400     0.635     -36.834     0.640     -37.271
0.645     -37.711     0.650     -38.155     0.655     -38.603
0.660     -39.055     0.665     -39.510     0.670     -39.970
0.675     -40.434     0.680     -40.902     0.685     -41.374
0.690     -41.851     0.695     -42.333     0.700     -42.819
0.705     -43.310     0.710     -43.806     0.715     -44.307
0.720     -44.813     0.725     -45.324     0.730     -45.839
0.735     -46.360     0.740     -46.887     0.745     -47.418
0.750     -47.955     0.755     -48.497     0.760     -49.045
0.765     -49.598     0.770     -50.156     0.775     -50.721
0.780     -51.291     0.785     -51.866     0.790     -52.448
0.795     -53.036     0.800     -53.629     0.805     -54.229
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0.810	-54.835	0.815	-55.448	0.820	-56.066
0.825	-56.691	0.830	-57.323	0.835	-57.961
0.840	-58.606	0.845	-59.258	0.850	-59.917
0.855	-60.583	0.860	-61.255	0.865	-61.935
0.870	-62.622	0.875	-63.316	0.880	-64.018
0.885	-64.727	0.890	-65.443	0.895	-66.167
0.900	-66.899	0.905	-67.638	0.910	-68.384
0.915	-69.139	0.920	-69.901	0.925	-70.671
0.930	-71.449	0.935	-72.235	0.940	-73.029
0.945	-73.832	0.950	-74.642	0.955	-75.461
0.960	-76.288	0.965	-77.123	0.970	-77.968
0.975	-78.820	0.980	-79.682	0.985	-80.552
0.990	-81.432	0.995	-82.321	1.000	-83.218
1.005	-84.125	1.010	-85.042	1.015	-85.968
1.020	-86.904	1.025	-87.849	1.030	-88.805
1.035	-89.770	1.040	-90.746	1.045	-91.732
1.050	-92.728	1.055	-93.735	1.060	-94.752
1.065	-95.781	1.070	-96.820	1.075	-97.870
1.080	-98.931	1.085	-100.000	1.090	-101.090
1.095	-102.180	1.100	-103.290	1.105	-104.410
1.110	-105.540	1.115	-106.680	1.120	-107.840
1.125	-109.000	1.130	-110.180	1.135	-111.370
1.140	-112.580	1.145	-113.800	1.150	-115.030
1.155	-116.270	1.160	-117.520	1.165	-118.790
1.170	-120.080	1.175	-121.370	1.180	-122.690
1.185	-124.010	1.190	-125.350	1.195	-126.700
1.200	-128.070	1.205	-129.460	1.210	-130.850
1.215	-132.270	1.220	-133.700	1.225	-135.140
1.230	-136.600	1.235	-138.080	1.240	-139.570
1.245	-141.080	1.250	-142.600	1.255	-144.150
1.260	-145.710	1.265	-147.280	1.270	-148.880
1.275	-150.490	1.280	-152.120	1.285	-153.770
1.290	-155.440	1.295	-157.120	1.300	-158.830
1.305	-160.550	1.310	-162.300	1.315	-164.060
1.320	-165.850	1.325	-167.650	1.330	-169.480
1.335	-171.320	1.340	-173.190	1.345	-175.080
1.350	-176.990	1.355	-178.930	1.360	-180.880
1.365	-182.870	1.370	-184.870	1.375	-186.900
1.380	-188.950	1.385	-191.020	1.390	-193.130
1.395	-195.250	1.400	-197.400	1.405	-199.580
1.410	-201.790	1.415	-204.020	1.420	-206.280
1.425	-208.560	1.430	-210.880	1.435	-213.220
1.440	-215.590	1.445	-217.990	1.450	-220.430
1.455	-222.890	1.460	-225.380	1.465	-227.910
1.470	-230.460	1.475	-233.050	1.480	-235.680
1.485	-238.330	1.490	-241.020	1.495	-243.750
1.500	-246.506	1.505	-249.300	1.510	-252.130
1.515	-255.008	1.520	-257.910	1.525	-260.850
1.530	-263.830	1.535	-266.850	1.540	-269.920
1.545	-273.020	1.550	-276.160	1.555	-279.350
1.560	-282.580	1.565	-285.850	1.570	-289.170
1.575	-292.530	1.580	-295.940	1.585	-299.390
1.590	-302.890	1.595	-306.440	1.600	-310.040
1.605	-313.690	1.610	-317.380	1.615	-321.130
1.620	-324.930	1.625	-328.790	1.630	-332.700
1.635	-336.660	1.640	-340.680	1.645	-344.760
1.650	-348.900	1.655	-353.090	1.660	-357.350
1.665	-361.660	1.670	-366.040	1.675	-370.480
1.680	-374.990	1.685	-379.560	1.690	-384.200
1.695	-388.900	1.700	-393.680	1.705	-398.530
1.710	-403.440	1.715	-408.430	1.720	-413.500
1.725	-418.640	1.730	-423.860	1.735	-429.160
1.740	-434.530	1.745	-439.990	1.750	-445.530
1.755	-451.160	1.760	-456.870	1.765	-462.670
1.770	-468.560	1.775	-474.540	1.780	-480.620
1.785	-486.780	1.790	-493.050	1.795	-499.410

1.800	-505.870	1.805	-512.440	1.810	-519.110
1.815	-525.880	1.820	-532.770	1.825	-539.760
1.830	-546.870	1.835	-554.090	1.840	-561.420
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1.875	-616.250	1.880	-624.600	1.885	-633.100
1.890	-641.740	1.895	-650.530	1.900	-659.460
1.905	-668.540	1.910	-677.780	1.915	-687.170
1.920	-696.730	1.925	-706.450	1.930	-716.330
1.935	-726.390	1.940	-736.620	1.945	-747.030
1.950	-757.620	1.955	-768.400	1.960	-779.370
1.965	-790.530	1.970	-801.880	1.975	-813.440
1.980	-825.210	1.985	-837.180	1.990	-849.370
1.995	-861.780	2.000	-874.410	2.005	-887.280
2.010	-900.380	2.015	-913.710	2.020	-927.300
2.025	-941.130	2.030	-955.220	2.035	-969.560
2.040	-984.180	2.045	-999.070	2.050	-1014.200
2.055	-1029.700	2.060	-1045.400	2.065	-1061.500
2.070	-1077.800	2.075	-1094.500	2.080	-1111.500
2.085	-1128.800	2.090	-1146.400	2.095	-1164.400
2.100	-1182.700	2.105	-1201.400	2.110	-1220.500
2.115	-1239.900	2.120	-1259.700	2.125	-1280.000
2.130	-1300.600	2.135	-1321.600	2.140	-1343.000
2.145	-1364.900	2.150	-1387.200	2.155	-1410.000
2.160	-1433.200	2.165	-1457.000	2.170	-1481.100
2.175	-1505.800	2.180	-1531.000	2.185	-1556.800
2.190	-1583.000	2.195	-1609.800	2.200	-1637.200
2.205	-1665.200	2.210	-1693.700	2.215	-1722.800
2.220	-1752.600	2.225	-1783.000	2.230	-1814.100
2.235	-1845.800	2.240	-1878.200	2.245	-1911.300
2.250	-1945.100	2.255	-1979.700	2.260	-2015.100
2.265	-2051.200	2.270	-2088.100	2.275	-2125.800
2.280	-2164.400	2.285	-2203.800	2.290	-2244.100
2.295	-2285.400	2.300	-2327.500	2.305	-2370.600
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2.385	-3214.300	2.390	-3278.300	2.395	-3343.900
2.400	-3411.000	2.405	-3479.800	2.410	-3550.400
2.415	-3622.600	2.420	-3696.600	2.425	-3772.500
2.430	-3850.300	2.435	-3930.000	2.440	-4011.800
2.445	-4095.500	2.450	-4181.500	2.455	-4269.500
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2.490	-4952.800	2.495	-5060.800	2.500	-5171.700
2.505	-5285.400	2.510	-5402.100	2.515	-5522.000
2.520	-5645.000	2.525	-5771.200	2.530	-5900.900
2.535	-6034.000	2.540	-6170.700	2.545	-6311.000
2.550	-6455.200	2.555	-6603.300	2.560	-6755.300
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2.640	-9845.700	2.645	-10088.000	2.650	-10337.000
2.655	-10593.000	2.660	-10856.000	2.665	-11127.000
2.670	-11405.000	2.675	-11692.000	2.680	-11986.000
2.685	-12289.000	2.690	-12600.000	2.695	-12920.000
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2.745	-16668.000	2.750	-17104.000	2.755	-17551.000
2.760	-18012.000	2.765	-18485.000	2.770	-18972.000
2.775	-19472.000	2.780	-19986.000	2.785	-20514.000

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2.835	-26657.000	2.840	-27365.000	2.845	-28091.000
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2.865	-31187.000	2.870	-32010.000	2.875	-32853.000
2.880	-33717.000	2.885	-34602.000	2.890	-35508.000
2.895	-36435.000	2.900	-37384.000	2.905	-38354.000
2.910	-39346.000	2.915	-40360.000	2.920	-41396.000
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2.940	-45762.000	2.945	-46908.000	2.950	-48076.000
2.955	-49265.000	2.960	-50475.000	2.965	-51705.000
2.970	-52954.000	2.975	-54221.000	2.980	-55502.000
2.985	-56794.000	2.990	-58086.000	2.995	-59356.000
3.000	-60527.000	3.005	-61104.000	3.010	-59528.000
3.015	-54914.000	3.020	-47850.000	3.025	-39601.000
3.030	-31288.000	3.035	-23640.000	3.040	-17063.000
3.045	-11742.000	3.050	-7694.900	3.055	-4803.400
3.060	-2847.400	3.065	-1551.500	3.070	-637.310
3.075	131.670	3.080	921.870	3.085	1820.900
3.090	2845.200	3.095	3957.300	3.100	5087.100
3.105	6150.400	3.110	7064.500	3.115	7757.700
3.120	8174.900	3.125	8279.000	3.130	8050.900
3.135	7487.200	3.140	6597.900	3.145	5404.600
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3.165	-1659.500	3.170	-3745.600	3.175	-5839.300
3.180	-7875.800	3.185	-9792.100	3.190	-11531.000
3.195	-13044.000	3.200	-14295.000	3.205	-15265.000
3.210	-15951.000	3.215	-16369.000	3.220	-16552.000
3.225	-16547.000	3.230	-16413.000	3.235	-16209.000
3.240	-15994.000	3.245	-15810.000	3.250	-15684.000
3.255	-15613.000	3.260	-15570.000	3.265	-15497.000
3.270	-15316.000	3.275	-14933.000	3.280	-14252.000
3.285	-13191.000	3.290	-11685.000	3.295	-9706.400
3.300	-7263.700	3.305	-4407.600	3.310	-1227.300
3.315	2156.200	3.320	5599.900	3.325	8950.700
3.330	12058.000	3.335	14783.000	3.340	17012.000
3.345	18662.000	3.350	19682.000	3.355	20057.000
3.360	19804.000	3.365	18972.000	3.370	17628.000
3.375	15861.000	3.380	13765.000	3.385	11442.000
3.390	8989.700	3.395	6500.300	3.400	4056.700
3.405	1730.500	3.410	-419.080	3.415	-2345.500
3.420	-4014.300	3.425	-5402.400	3.430	-6497.400
3.435	-7296.100	3.440	-7803.500	3.445	-8031.900
3.450	-7999.300	3.455	-7729.100	3.460	-7248.400
3.465	-6587.500	3.470	-5778.600	3.475	-4854.900
3.480	-3850.100	3.485	-2797.200	3.490	-1727.800
3.495	-671.610	3.500	344.240	3.505	1295.500
3.510	2161.500	3.515	2924.800	3.520	3572.000
3.525	4093.600	3.530	4483.800	3.535	4740.400
3.540	4865.000	3.545	4862.200	3.550	4739.400
3.555	4506.400	3.560	4174.900	3.565	3757.800
3.570	3268.800	3.575	2721.600	3.580	2129.700
3.585	1505.900	3.590	862.130	3.595	208.840
3.600	-444.590	3.605	-1090.000	3.610	-1720.200
3.615	-2329.100	3.620	-2910.700	3.625	-3459.500
3.630	-3970.100	3.635	-4436.800	3.640	-4853.500
3.645	-5213.800	3.650	-5511.100	3.655	-5738.800
3.660	-5890.500	3.665	-5960.400	3.670	-5943.500
3.675	-5836.600	3.680	-5637.900	3.685	-5347.900
3.690	-4969.500	3.695	-4508.000	3.700	-3971.400
3.705	-3370.000	3.710	-2716.400	3.715	-2025.000
3.720	-1311.800	3.725	-593.640	3.730	112.370
3.735	789.230	3.740	1420.800	3.745	1992.400
3.750	2491.100	3.755	2906.300	3.760	3230.000
3.765	3457.000	3.770	3585.100	3.775	3614.800

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3.780    3549.600      3.785    3395.600      3.790    3160.900
3.795    2855.900      3.800    2492.400      3.805    2083.200
3.810    1641.900      3.815    1182.200      3.820     717.540
3.825     260.970      3.830    -175.590      3.835    -581.410
3.840    -947.240      3.845   -1265.500      3.850   -1530.200
3.855   -1737.500      3.860   -1885.000      3.865   -1972.200
3.870   -2000.200      3.875   -1971.600      3.880   -1890.200
3.885   -1761.100      3.890   -1590.100      3.895   -1383.800
3.900   -1149.100      3.905    -893.340      3.910    -623.780
3.915    -347.600      3.920     -71.662      3.925     197.590
3.930     454.250      3.935     693.040      3.940     909.370
3.945    1099.400      3.950    1260.000      3.955    1388.800
3.960    1484.200      3.965    1545.300      3.970    1571.900
3.975    1564.400      3.980    1523.700      3.985    1451.500
3.990    1349.800      3.995    1221.000      4.000    1068.100
801       1.0      FUNCTION 9
0.000       0.000   0.005      -0.047   0.010      -0.047
0.015      -0.047   0.020      -0.046   0.025      -0.046
0.030      -0.046   0.035      -0.047   0.040      -0.047
0.045      -0.048   0.050      -0.049   0.055      -0.050
0.060      -0.051   0.065      -0.052   0.070      -0.054
0.075      -0.055   0.080      -0.056   0.085      -0.058
0.090      -0.059   0.095      -0.061   0.100      -0.062
0.105      -0.064   0.110      -0.065   0.115      -0.067
0.120      -0.068   0.125      -0.070   0.130      -0.071
0.135      -0.073   0.140      -0.075   0.145      -0.077
0.150      -0.078   0.155      -0.080   0.160      -0.082
0.165      -0.084   0.170      -0.086   0.175      -0.088
0.180      -0.090   0.185      -0.092   0.190      -0.094
0.195      -0.096   0.200      -0.098   0.205      -0.101
0.210      -0.103   0.215      -0.105   0.220      -0.107
0.225      -0.110   0.230      -0.112   0.235      -0.114
0.240      -0.116   0.245      -0.119   0.250      -0.121
0.255      -0.124   0.260      -0.126   0.265      -0.128
0.270      -0.131   0.275      -0.133   0.280      -0.135
0.285      -0.138   0.290      -0.140   0.295      -0.143
0.300      -0.145   0.305      -0.148   0.310      -0.150
0.315      -0.152   0.320      -0.155   0.325      -0.157
0.330      -0.160   0.335      -0.162   0.340      -0.165
0.345      -0.167   0.350      -0.170   0.355      -0.172
0.360      -0.175   0.365      -0.178   0.370      -0.180
0.375      -0.183   0.380      -0.186   0.385      -0.189
0.390      -0.191   0.395      -0.194   0.400      -0.197
0.405      -0.200   0.410      -0.203   0.415      -0.206
0.420      -0.209   0.425      -0.212   0.430      -0.214
0.435      -0.217   0.440      -0.220   0.445      -0.223
0.450      -0.226   0.455      -0.229   0.460      -0.233
0.465      -0.236   0.470      -0.239   0.475      -0.242
0.480      -0.245   0.485      -0.248   0.490      -0.251
0.495      -0.254   0.500      -0.257   0.505      -0.260
0.510      -0.263   0.515      -0.266   0.520      -0.269
0.525      -0.272   0.530      -0.275   0.535      -0.278
0.540      -0.281   0.545      -0.284   0.550      -0.287
0.555      -0.290   0.560      -0.294   0.565      -0.297
0.570      -0.300   0.575      -0.303   0.580      -0.306
0.585      -0.309   0.590      -0.313   0.595      -0.316
0.600      -0.319   0.605      -0.322   0.610      -0.326
0.615      -0.329   0.620      -0.332   0.625      -0.336
0.630      -0.339   0.635      -0.343   0.640      -0.346
0.645      -0.349   0.650      -0.353   0.655      -0.356
0.660      -0.360   0.665      -0.364   0.670      -0.367
0.675      -0.371   0.680      -0.374   0.685      -0.378
0.690      -0.382   0.695      -0.386   0.700      -0.389
0.705      -0.393   0.710      -0.397   0.715      -0.401
0.720      -0.405   0.725      -0.409   0.730      -0.413
0.735      -0.417   0.740      -0.421   0.745      -0.425
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0.750	-0.430	0.755	-0.434	0.760	-0.438
0.765	-0.443	0.770	-0.447	0.775	-0.452
0.780	-0.456	0.785	-0.461	0.790	-0.465
0.795	-0.470	0.800	-0.475	0.805	-0.480
0.810	-0.485	0.815	-0.490	0.820	-0.495
0.825	-0.500	0.830	-0.505	0.835	-0.510
0.840	-0.515	0.845	-0.520	0.850	-0.526
0.855	-0.531	0.860	-0.536	0.865	-0.542
0.870	-0.548	0.875	-0.553	0.880	-0.559
0.885	-0.564	0.890	-0.570	0.895	-0.576
0.900	-0.582	0.905	-0.588	0.910	-0.594
0.915	-0.600	0.920	-0.606	0.925	-0.612
0.930	-0.619	0.935	-0.625	0.940	-0.631
0.945	-0.638	0.950	-0.644	0.955	-0.651
0.960	-0.658	0.965	-0.664	0.970	-0.671
0.975	-0.678	0.980	-0.685	0.985	-0.692
0.990	-0.699	0.995	-0.706	1.000	-0.714
1.005	-0.721	1.010	-0.728	1.015	-0.736
1.020	-0.744	1.025	-0.751	1.030	-0.759
1.035	-0.767	1.040	-0.775	1.045	-0.783
1.050	-0.791	1.055	-0.799	1.060	-0.807
1.065	-0.816	1.070	-0.824	1.075	-0.833
1.080	-0.841	1.085	-0.850	1.090	-0.859
1.095	-0.868	1.100	-0.877	1.105	-0.886
1.110	-0.895	1.115	-0.904	1.120	-0.914
1.125	-0.923	1.130	-0.933	1.135	-0.943
1.140	-0.953	1.145	-0.963	1.150	-0.973
1.155	-0.983	1.160	-0.993	1.165	-1.003
1.170	-1.014	1.175	-1.025	1.180	-1.035
1.185	-1.046	1.190	-1.057	1.195	-1.068
1.200	-1.080	1.205	-1.091	1.210	-1.102
1.215	-1.114	1.220	-1.126	1.225	-1.138
1.230	-1.150	1.235	-1.162	1.240	-1.174
1.245	-1.186	1.250	-1.199	1.255	-1.212
1.260	-1.224	1.265	-1.237	1.270	-1.251
1.275	-1.264	1.280	-1.277	1.285	-1.291
1.290	-1.305	1.295	-1.318	1.300	-1.333
1.305	-1.347	1.310	-1.361	1.315	-1.376
1.320	-1.390	1.325	-1.405	1.330	-1.420
1.335	-1.436	1.340	-1.451	1.345	-1.467
1.350	-1.483	1.355	-1.499	1.360	-1.515
1.365	-1.531	1.370	-1.548	1.375	-1.565
1.380	-1.582	1.385	-1.599	1.390	-1.616
1.395	-1.634	1.400	-1.652	1.405	-1.670
1.410	-1.688	1.415	-1.707	1.420	-1.725
1.425	-1.744	1.430	-1.764	1.435	-1.783
1.440	-1.803	1.445	-1.823	1.450	-1.843
1.455	-1.864	1.460	-1.884	1.465	-1.905
1.470	-1.927	1.475	-1.948	1.480	-1.970
1.485	-1.992	1.490	-2.015	1.495	-2.038
1.500	-2.061	1.505	-2.084	1.510	-2.108
1.515	-2.132	1.520	-2.156	1.525	-2.181
1.530	-2.206	1.535	-2.231	1.540	-2.257
1.545	-2.283	1.550	-2.309	1.555	-2.336
1.560	-2.363	1.565	-2.391	1.570	-2.418
1.575	-2.447	1.580	-2.475	1.585	-2.504
1.590	-2.534	1.595	-2.564	1.600	-2.594
1.605	-2.625	1.610	-2.656	1.615	-2.688
1.620	-2.720	1.625	-2.752	1.630	-2.785
1.635	-2.819	1.640	-2.853	1.645	-2.887
1.650	-2.922	1.655	-2.958	1.660	-2.994
1.665	-3.030	1.670	-3.067	1.675	-3.105
1.680	-3.143	1.685	-3.182	1.690	-3.222
1.695	-3.261	1.700	-3.302	1.705	-3.343
1.710	-3.385	1.715	-3.428	1.720	-3.471
1.725	-3.514	1.730	-3.559	1.735	-3.604

1.740	-3.650	1.745	-3.696	1.750	-3.744
1.755	-3.792	1.760	-3.840	1.765	-3.890
1.770	-3.940	1.775	-3.992	1.780	-4.043
1.785	-4.096	1.790	-4.150	1.795	-4.204
1.800	-4.260	1.805	-4.316	1.810	-4.373
1.815	-4.431	1.820	-4.491	1.825	-4.551
1.830	-4.612	1.835	-4.674	1.840	-4.737
1.845	-4.801	1.850	-4.866	1.855	-4.933
1.860	-5.000	1.865	-5.069	1.870	-5.139
1.875	-5.210	1.880	-5.282	1.885	-5.355
1.890	-5.430	1.895	-5.506	1.900	-5.583
1.905	-5.662	1.910	-5.742	1.915	-5.823
1.920	-5.906	1.925	-5.990	1.930	-6.076
1.935	-6.163	1.940	-6.252	1.945	-6.343
1.950	-6.435	1.955	-6.529	1.960	-6.624
1.965	-6.721	1.970	-6.820	1.975	-6.921
1.980	-7.024	1.985	-7.128	1.990	-7.235
1.995	-7.343	2.000	-7.453	2.005	-7.566
2.010	-7.681	2.015	-7.797	2.020	-7.916
2.025	-8.038	2.030	-8.161	2.035	-8.287
2.040	-8.415	2.045	-8.546	2.050	-8.679
2.055	-8.815	2.060	-8.954	2.065	-9.095
2.070	-9.239	2.075	-9.386	2.080	-9.536
2.085	-9.688	2.090	-9.844	2.095	-10.003
2.100	-10.165	2.105	-10.330	2.110	-10.499
2.115	-10.671	2.120	-10.847	2.125	-11.026
2.130	-11.209	2.135	-11.395	2.140	-11.586
2.145	-11.780	2.150	-11.978	2.155	-12.181
2.160	-12.388	2.165	-12.599	2.170	-12.815
2.175	-13.035	2.180	-13.260	2.185	-13.490
2.190	-13.724	2.195	-13.964	2.200	-14.209
2.205	-14.459	2.210	-14.715	2.215	-14.976
2.220	-15.243	2.225	-15.516	2.230	-15.795
2.235	-16.080	2.240	-16.371	2.245	-16.669
2.250	-16.974	2.255	-17.285	2.260	-17.604
2.265	-17.930	2.270	-18.263	2.275	-18.604
2.280	-18.953	2.285	-19.310	2.290	-19.675
2.295	-20.048	2.300	-20.431	2.305	-20.822
2.310	-21.222	2.315	-21.632	2.320	-22.052
2.325	-22.482	2.330	-22.922	2.335	-23.372
2.340	-23.833	2.345	-24.306	2.350	-24.790
2.355	-25.286	2.360	-25.794	2.365	-26.314
2.370	-26.847	2.375	-27.393	2.380	-27.953
2.385	-28.527	2.390	-29.116	2.395	-29.719
2.400	-30.337	2.405	-30.971	2.410	-31.621
2.415	-32.287	2.420	-32.971	2.425	-33.672
2.430	-34.392	2.435	-35.129	2.440	-35.886
2.445	-36.663	2.450	-37.460	2.455	-38.278
2.460	-39.118	2.465	-39.980	2.470	-40.864
2.475	-41.773	2.480	-42.705	2.485	-43.662
2.490	-44.646	2.495	-45.655	2.500	-46.692
2.505	-47.758	2.510	-48.852	2.515	-49.976
2.520	-51.131	2.525	-52.318	2.530	-53.537
2.535	-54.791	2.540	-56.079	2.545	-57.403
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2.580	-67.772	2.585	-69.425	2.590	-71.126
2.595	-72.875	2.600	-74.675	2.605	-76.526
2.610	-78.430	2.615	-80.390	2.620	-82.405
2.625	-84.479	2.630	-86.614	2.635	-88.810
2.640	-91.069	2.645	-93.395	2.650	-95.788
2.655	-98.251	2.660	-100.790	2.665	-103.400
2.670	-106.080	2.675	-108.840	2.680	-111.690
2.685	-114.620	2.690	-117.630	2.695	-120.730
2.700	-123.920	2.705	-127.210	2.710	-130.590
2.715	-134.070	2.720	-137.660	2.725	-141.340

2.730	-145.140	2.735	-149.040	2.740	-153.060
2.745	-157.190	2.750	-161.440	2.755	-165.820
2.760	-170.320	2.765	-174.940	2.770	-179.700
2.775	-184.600	2.780	-189.630	2.785	-194.810
2.790	-200.130	2.795	-205.600	2.800	-211.210
2.805	-216.990	2.810	-222.920	2.815	-229.010
2.820	-235.270	2.825	-241.690	2.830	-248.280
2.835	-255.050	2.840	-261.990	2.845	-269.120
2.850	-276.420	2.855	-283.910	2.860	-291.580
2.865	-299.440	2.870	-307.500	2.875	-315.740
2.880	-324.180	2.885	-332.820	2.890	-341.650
2.895	-350.680	2.900	-359.910	2.905	-369.340
2.910	-378.970	2.915	-388.800	2.920	-398.820
2.925	-409.050	2.930	-419.470	2.935	-430.080
2.940	-440.880	2.945	-451.880	2.950	-463.050
2.955	-474.400	2.960	-485.930	2.965	-497.600
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3.000	-578.700	3.005	-586.550	3.010	-582.860
3.015	-549.190	3.020	-464.670	3.025	-321.620
3.030	-134.820	3.035	64.217	3.040	242.140
3.045	376.260	3.050	458.290	3.055	490.820
3.060	481.510	3.065	438.690	3.070	369.610
3.075	280.690	3.080	178.490	3.085	70.282
3.090	-35.930	3.095	-132.120	3.100	-211.180
3.105	-267.780	3.110	-298.910	3.115	-304.020
3.120	-284.810	3.125	-244.820	3.130	-188.900
3.135	-122.670	3.140	-52.070	3.145	17.169
3.150	79.855	3.155	131.690	3.160	169.520
3.165	191.490	3.170	197.110	3.175	187.200
3.180	163.720	3.185	129.530	3.190	88.112
3.195	43.245	3.200	-1.329	3.205	-42.185
3.210	-76.454	3.215	-102.010	3.220	-117.550
3.225	-122.660	3.230	-117.760	3.235	-104.000
3.240	-83.137	3.245	-57.325	3.250	-28.941
3.255	-0.377	3.260	26.147	3.265	48.740
3.270	65.957	3.275	76.885	3.280	81.165
3.285	78.981	3.290	71.003	3.295	58.297
3.300	42.213	3.305	24.256	3.310	5.961
3.315	-11.233	3.320	-26.081	3.325	-37.620
3.330	-45.215	3.335	-48.586	3.340	-47.801
3.345	-43.242	3.350	-35.556	3.355	-25.579
3.360	-14.258	3.365	-2.573	3.370	8.546
3.375	18.282	3.380	25.991	3.385	31.233
3.390	33.795	3.395	33.686	3.400	31.122
3.405	26.490	3.410	20.311	3.415	13.180
3.420	5.723	3.425	-1.458	3.430	-7.830
3.435	-12.963	3.440	-16.558	3.445	-18.455
3.450	-18.641	3.455	-17.233	3.460	-14.465
3.465	-10.655	3.470	-6.180	3.475	-1.436
3.480	3.190	3.485	7.348	3.490	10.753
3.495	13.201	3.500	14.576	3.505	14.856
3.510	14.103	3.515	12.457	3.520	10.112
3.525	7.305	3.530	4.288	3.535	1.310
3.540	-1.401	3.545	-3.656	3.550	-5.318
3.555	-6.303	3.560	-6.589	3.565	-6.207
3.570	-5.238	3.575	-3.805	3.580	-2.052
3.585	-0.141	3.590	1.768	3.595	3.529
3.600	5.015	3.605	6.134	3.610	6.828
3.615	7.075	3.620	6.892	3.625	6.325
3.630	5.448	3.635	4.353	3.640	3.142
3.645	1.916	3.650	0.772	3.655	-0.209
3.660	-0.963	3.665	-1.450	3.670	-1.653
3.675	-1.579	3.680	-1.254	3.685	-0.724
3.690	-0.045	3.695	0.718	3.700	1.500
3.705	2.239	3.710	2.881	3.715	3.384

```
3.720       3.719       3.725       3.874       3.730       3.851
3.735       3.664       3.740       3.342       3.745       2.919
3.750       2.436       3.755       1.935       3.760       1.455
3.765       1.032       3.770       0.695       3.775       0.462
3.780       0.343       3.785       0.339       3.790       0.441
3.795       0.633       3.800       0.892       3.805       1.194
3.810       1.512       3.815       1.819       3.820       2.093
3.825       2.316       3.830       2.473       3.835       2.557
3.840       2.569       3.845       2.512       3.850       2.395
3.855       2.234       3.860       2.042       3.865       1.838
3.870       1.638       3.875       1.457       3.880       1.308
3.885       1.199       3.890       1.136       3.895       1.119
3.900       1.148       3.905       1.215       3.910       1.312
3.915       1.430       3.920       1.557       3.925       1.684
3.930       1.800       3.935       1.896       3.940       1.968
3.945       2.011       3.950       2.024       3.955       2.008
3.960       1.967       3.965       1.905       3.970       1.830
3.975       1.747       3.980       1.664       3.985       1.587
3.990       1.521       3.995       1.471       4.000       1.438
801      1.0      FUNCTION 10
0.000       0.000       0.005      -0.186       0.010      -0.185
0.015      -0.184       0.020      -0.184       0.025      -0.183
0.030      -0.184       0.035      -0.185       0.040      -0.187
0.045      -0.190       0.050      -0.194       0.055      -0.198
0.060      -0.203       0.065      -0.208       0.070      -0.213
0.075      -0.218       0.080      -0.223       0.085      -0.229
0.090      -0.234       0.095      -0.240       0.100      -0.246
0.105      -0.252       0.110      -0.258       0.115      -0.264
0.120      -0.270       0.125      -0.276       0.130      -0.283
0.135      -0.290       0.140      -0.297       0.145      -0.304
0.150      -0.311       0.155      -0.318       0.160      -0.325
0.165      -0.333       0.170      -0.341       0.175      -0.348
0.180      -0.356       0.185      -0.365       0.190      -0.373
0.195      -0.381       0.200      -0.390       0.205      -0.398
0.210      -0.407       0.215      -0.416       0.220      -0.425
0.225      -0.434       0.230      -0.443       0.235      -0.452
0.240      -0.461       0.245      -0.470       0.250      -0.480
0.255      -0.489       0.260      -0.499       0.265      -0.508
0.270      -0.517       0.275      -0.527       0.280      -0.536
0.285      -0.546       0.290      -0.555       0.295      -0.565
0.300      -0.574       0.305      -0.584       0.310      -0.594
0.315      -0.603       0.320      -0.613       0.325      -0.623
0.330      -0.633       0.335      -0.643       0.340      -0.652
0.345      -0.662       0.350      -0.673       0.355      -0.683
0.360      -0.693       0.365      -0.704       0.370      -0.714
0.375      -0.725       0.380      -0.736       0.385      -0.746
0.390      -0.757       0.395      -0.769       0.400      -0.780
0.405      -0.791       0.410      -0.803       0.415      -0.814
0.420      -0.826       0.425      -0.837       0.430      -0.849
0.435      -0.861       0.440      -0.873       0.445      -0.885
0.450      -0.897       0.455      -0.909       0.460      -0.921
0.465      -0.933       0.470      -0.945       0.475      -0.957
0.480      -0.969       0.485      -0.981       0.490      -0.993
0.495      -1.005       0.500      -1.017       0.505      -1.029
0.510      -1.041       0.515      -1.053       0.520      -1.065
0.525      -1.077       0.530      -1.089       0.535      -1.101
0.540      -1.113       0.545      -1.126       0.550      -1.138
0.555      -1.150       0.560      -1.162       0.565      -1.175
0.570      -1.187       0.575      -1.200       0.580      -1.212
0.585      -1.225       0.590      -1.238       0.595      -1.251
0.600      -1.263       0.605      -1.276       0.610      -1.289
0.615      -1.303       0.620      -1.316       0.625      -1.329
0.630      -1.343       0.635      -1.356       0.640      -1.370
0.645      -1.383       0.650      -1.397       0.655      -1.411
0.660      -1.425       0.665      -1.439       0.670      -1.453
0.675      -1.468       0.680      -1.482       0.685      -1.497
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0.690	-1.512	0.695	-1.527	0.700	-1.542
0.705	-1.557	0.710	-1.572	0.715	-1.588
0.720	-1.603	0.725	-1.619	0.730	-1.635
0.735	-1.652	0.740	-1.668	0.745	-1.685
0.750	-1.701	0.755	-1.718	0.760	-1.736
0.765	-1.753	0.770	-1.771	0.775	-1.788
0.780	-1.806	0.785	-1.825	0.790	-1.843
0.795	-1.862	0.800	-1.881	0.805	-1.900
0.810	-1.919	0.815	-1.939	0.820	-1.958
0.825	-1.978	0.830	-1.998	0.835	-2.019
0.840	-2.039	0.845	-2.060	0.850	-2.081
0.855	-2.103	0.860	-2.124	0.865	-2.146
0.870	-2.168	0.875	-2.190	0.880	-2.212
0.885	-2.235	0.890	-2.258	0.895	-2.281
0.900	-2.304	0.905	-2.328	0.910	-2.351
0.915	-2.375	0.920	-2.400	0.925	-2.424
0.930	-2.449	0.935	-2.474	0.940	-2.499
0.945	-2.525	0.950	-2.551	0.955	-2.577
0.960	-2.604	0.965	-2.630	0.970	-2.657
0.975	-2.685	0.980	-2.712	0.985	-2.740
0.990	-2.768	0.995	-2.797	1.000	-2.826
1.005	-2.855	1.010	-2.884	1.015	-2.914
1.020	-2.944	1.025	-2.974	1.030	-3.005
1.035	-3.036	1.040	-3.067	1.045	-3.099
1.050	-3.131	1.055	-3.164	1.060	-3.196
1.065	-3.229	1.070	-3.263	1.075	-3.297
1.080	-3.331	1.085	-3.365	1.090	-3.400
1.095	-3.436	1.100	-3.471	1.105	-3.507
1.110	-3.544	1.115	-3.581	1.120	-3.618
1.125	-3.656	1.130	-3.694	1.135	-3.732
1.140	-3.771	1.145	-3.811	1.150	-3.850
1.155	-3.891	1.160	-3.931	1.165	-3.973
1.170	-4.014	1.175	-4.056	1.180	-4.099
1.185	-4.142	1.190	-4.185	1.195	-4.229
1.200	-4.274	1.205	-4.319	1.210	-4.364
1.215	-4.410	1.220	-4.457	1.225	-4.504
1.230	-4.551	1.235	-4.599	1.240	-4.648
1.245	-4.697	1.250	-4.747	1.255	-4.797
1.260	-4.848	1.265	-4.899	1.270	-4.951
1.275	-5.003	1.280	-5.057	1.285	-5.110
1.290	-5.165	1.295	-5.220	1.300	-5.275
1.305	-5.332	1.310	-5.389	1.315	-5.446
1.320	-5.505	1.325	-5.564	1.330	-5.623
1.335	-5.684	1.340	-5.745	1.345	-5.807
1.350	-5.869	1.355	-5.933	1.360	-5.997
1.365	-6.062	1.370	-6.127	1.375	-6.194
1.380	-6.261	1.385	-6.329	1.390	-6.398
1.395	-6.468	1.400	-6.539	1.405	-6.610
1.410	-6.683	1.415	-6.756	1.420	-6.831
1.425	-6.906	1.430	-6.982	1.435	-7.059
1.440	-7.137	1.445	-7.217	1.450	-7.297
1.455	-7.378	1.460	-7.460	1.465	-7.544
1.470	-7.628	1.475	-7.714	1.480	-7.800
1.485	-7.888	1.490	-7.977	1.495	-8.067
1.500	-8.158	1.505	-8.251	1.510	-8.345
1.515	-8.440	1.520	-8.536	1.525	-8.634
1.530	-8.733	1.535	-8.833	1.540	-8.935
1.545	-9.038	1.550	-9.142	1.555	-9.248
1.560	-9.355	1.565	-9.464	1.570	-9.575
1.575	-9.686	1.580	-9.800	1.585	-9.915
1.590	-10.032	1.595	-10.150	1.600	-10.270
1.605	-10.392	1.610	-10.515	1.615	-10.540
1.620	-10.768	1.625	-10.896	1.630	-11.027
1.635	-11.160	1.640	-11.294	1.645	-11.431
1.650	-11.569	1.655	-11.710	1.660	-11.852
1.665	-11.997	1.670	-12.144	1.675	-12.293

1.680	-12.444	1.685	-12.598	1.690	-12.754
1.695	-12.912	1.700	-13.073	1.705	-13.236
1.710	-13.401	1.715	-13.569	1.720	-13.740
1.725	-13.913	1.730	-14.089	1.735	-14.268
1.740	-14.450	1.745	-14.634	1.750	-14.821
1.755	-15.011	1.760	-15.204	1.765	-15.401
1.770	-15.600	1.775	-15.802	1.780	-16.008
1.785	-16.217	1.790	-16.429	1.795	-16.645
1.800	-16.865	1.805	-17.087	1.810	-17.314
1.815	-17.544	1.820	-17.778	1.825	-18.016
1.830	-18.258	1.835	-18.504	1.840	-18.754
1.845	-19.008	1.850	-19.266	1.855	-19.529
1.860	-19.796	1.865	-20.067	1.870	-20.344
1.875	-20.625	1.880	-20.910	1.885	-21.201
1.890	-21.497	1.895	-21.797	1.900	-22.103
1.905	-22.415	1.910	-22.731	1.915	-23.054
1.920	-23.382	1.925	-23.716	1.930	-24.055
1.935	-24.401	1.940	-24.753	1.945	-25.111
1.950	-25.476	1.955	-25.847	1.960	-26.225
1.965	-26.610	1.970	-27.001	1.975	-27.400
1.980	-27.807	1.985	-28.221	1.990	-28.642
1.995	-29.071	2.000	-29.508	2.005	-29.954
2.010	-30.408	2.015	-30.870	2.020	-31.341
2.025	-31.821	2.030	-32.310	2.035	-32.809
2.040	-33.317	2.045	-33.834	2.050	-34.362
2.055	-34.900	2.060	-35.449	2.065	-36.008
2.070	-36.578	2.075	-37.159	2.080	-37.752
2.085	-38.357	2.090	-38.974	2.095	-39.602
2.100	-40.244	2.105	-40.899	2.110	-41.566
2.115	-42.247	2.120	-42.943	2.125	-43.652
2.130	-44.376	2.135	-45.114	2.140	-45.868
2.145	-46.638	2.150	-47.424	2.155	-48.226
2.160	-49.044	2.165	-49.881	2.170	-50.734
2.175	-51.606	2.180	-52.497	2.185	-53.406
2.190	-54.335	2.195	-55.284	2.200	-56.254
2.205	-57.244	2.210	-58.256	2.215	-59.291
2.220	-60.348	2.225	-61.428	2.230	-62.532
2.235	-63.661	2.240	-64.815	2.245	-65.995
2.250	-67.201	2.255	-68.434	2.260	-69.696
2.265	-70.986	2.270	-72.305	2.275	-73.655
2.280	-75.036	2.285	-76.448	2.290	-77.894
2.295	-79.373	2.300	-80.886	2.305	-82.436
2.310	-84.021	2.315	-85.644	2.320	-87.306
2.325	-89.007	2.330	-90.748	2.335	-92.532
2.340	-94.358	2.345	-96.229	2.350	-98.145
2.355	-100.110	2.360	-102.120	2.365	-104.180
2.370	-106.290	2.375	-108.450	2.380	-110.670
2.385	-112.940	2.390	-115.270	2.395	-117.660
2.400	-120.110	2.405	-122.620	2.410	-125.190
2.415	-127.830	2.420	-130.540	2.425	-133.310
2.430	-136.160	2.435	-139.080	2.440	-142.080
2.445	-145.150	2.450	-148.310	2.455	-151.550
2.460	-154.870	2.465	-158.280	2.470	-161.790
2.475	-165.380	2.480	-169.070	2.485	-172.860
2.490	-176.760	2.495	-180.750	2.500	-184.860
2.505	-189.080	2.510	-193.410	2.515	-197.860
2.520	-202.430	2.525	-207.130	2.530	-211.960
2.535	-216.920	2.540	-222.020	2.545	-227.260
2.550	-232.650	2.555	-238.190	2.560	-243.880
2.565	-249.740	2.570	-255.760	2.575	-261.950
2.580	-268.320	2.585	-274.860	2.590	-281.600
2.595	-288.520	2.600	-295.650	2.605	-302.980
2.610	-310.520	2.615	-318.270	2.620	-326.250
2.625	-334.470	2.630	-342.910	2.635	-351.610
2.640	-360.560	2.645	-369.760	2.650	-379.240
2.655	-388.990	2.660	-399.030	2.665	-409.360

2.670	-419.990	2.675	-430.930	2.680	-442.190
2.685	-453.790	2.690	-465.720	2.695	-478.000
2.700	-490.640	2.705	-503.650	2.710	-517.030
2.715	-530.810	2.720	-545.000	2.725	-559.590
2.730	-574.610	2.735	-590.070	2.740	-605.970
2.745	-622.330	2.750	-639.170	2.755	-656.490
2.760	-674.300	2.765	-692.630	2.770	-711.470
2.775	-730.860	2.780	-750.780	2.785	-771.270
2.790	-792.330	2.795	-813.980	2.800	-836.230
2.805	-859.090	2.810	-882.570	2.815	-906.690
2.820	-931.460	2.825	-956.890	2.830	-982.990
2.835	-1009.800	2.840	-1037.300	2.845	-1065.500
2.850	-1094.400	2.855	-1124.000	2.860	-1154.400
2.865	-1185.500	2.870	-1217.400	2.875	-1250.100
2.880	-1283.500	2.885	-1317.700	2.890	-1352.600
2.895	-1388.400	2.900	-1424.900	2.905	-1462.300
2.910	-1500.400	2.915	-1539.300	2.920	-1579.000
2.925	-1619.500	2.930	-1660.700	2.935	-1702.700
2.940	-1745.500	2.945	-1789.000	2.950	-1833.300
2.955	-1878.200	2.960	-1923.800	2.965	-1970.000
2.970	-2016.400	2.975	-2063.100	2.980	-2109.900
2.985	-2156.700	2.990	-2203.100	2.995	-2248.500
3.000	-2290.900	3.005	-2321.600	3.010	-2305.200
3.015	-2168.100	3.020	-1829.200	3.025	-1261.300
3.030	-524.770	3.035	256.770	3.040	954.350
3.045	1480.700	3.050	1803.700	3.055	1933.000
3.060	1897.700	3.065	1729.900	3.070	1457.800
3.075	1107.200	3.080	703.870	3.085	276.980
3.090	-141.870	3.095	-521.040	3.100	-832.580
3.105	-1055.600	3.110	-1178.200	3.115	-1198.300
3.120	-1122.600	3.125	-965.000	3.130	-744.590
3.135	-483.570	3.140	-205.250	3.145	67.696
3.150	314.810	3.155	519.140	3.160	668.260
3.165	754.860	3.170	777.020	3.175	737.950
3.180	645.370	3.185	510.590	3.190	347.340
3.195	170.480	3.200	-5.225	3.205	-166.270
3.210	-301.360	3.215	-402.080	3.220	-463.340
3.225	-483.490	3.230	-464.180	3.235	-409.950
3.240	-327.700	3.245	-225.950	3.250	-114.060
3.255	-1.462	3.260	103.100	3.265	192.150
3.270	260.020	3.275	303.100	3.280	319.970
3.285	311.360	3.290	279.910	3.295	229.820
3.300	166.420	3.305	95.635	3.310	23.515
3.315	-44.261	3.320	-102.790	3.325	-148.280
3.330	-178.220	3.335	-191.510	3.340	-188.410
3.345	-170.440	3.350	-140.140	3.355	-100.810
3.360	-56.183	3.365	-10.120	3.370	33.709
3.375	72.090	3.380	102.480	3.385	123.140
3.390	133.240	3.395	132.810	3.400	122.700
3.405	104.450	3.410	80.085	3.415	51.975
3.420	22.581	3.425	-5.727	3.430	-30.846
3.435	-51.082	3.440	-65.252	3.445	-72.732
3.450	-73.463	3.455	-67.914	3.460	-57.001
3.465	-41.983	3.470	-24.339	3.475	-5.637
3.480	12.596	3.485	28.986	3.490	42.410
3.495	52.060	3.500	57.482	3.505	58.585
3.510	55.618	3.515	49.125	3.520	39.883
3.525	28.816	3.530	16.923	3.535	5.186
3.540	-5.500	3.545	-14.392	3.550	-20.942
3.555	-24.826	3.560	-25.951	3.565	-24.445
3.570	-20.628	3.575	-14.976	3.580	-8.067
3.585	-0.534	3.590	6.994	3.595	13.933
3.600	19.793	3.605	24.205	3.610	26.939
3.615	27.914	3.620	27.191	3.625	24.956
3.630	21.500	3.635	17.184	3.640	12.407
3.645	7.575	3.650	3.064	3.655	-0.802

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        3.660       -3.775       3.665       -5.695       3.670       -6.495
        3.675       -6.201       3.680       -4.921       3.685       -2.831
        3.690       -0.155       3.695        2.854       3.700        5.937
        3.705        8.850       3.710       11.380       3.715       13.362
        3.720       14.684       3.725       15.295       3.730       15.203
        3.735       14.468       3.740       13.197       3.745       11.530
        3.750        9.626       3.755        7.649       3.760        5.758
        3.765        4.092       3.770        2.762       3.775        1.844
        3.780        1.377       3.785        1.361       3.790        1.763
        3.795        2.518       3.800        3.541       3.805        4.731
        3.810        5.982       3.815        7.194       3.820        8.275
        3.825        9.151       3.830        9.771       3.835       10.105
        3.840       10.150       3.845        9.924       3.850        9.466
        3.855        8.828       3.860        8.074       3.865        7.269
        3.870        6.481       3.875        5.768       3.880        5.179
        3.885        4.750       3.890        4.501       3.895        4.437
        3.900        4.548       3.905        4.811       3.910        5.195
        3.915        5.660       3.920        6.163       3.925        6.661
        3.930        7.318       3.935        7.499       3.940        7.781
        3.945        7.950       3.950        8.001       3.955        7.939
        3.960        7.777       3.965        7.534       3.970        7.237
        3.975        6.910       3.980        6.583       3.985        6.278
        3.990        6.019       3.995        5.821       4.000        5.694
801         1.0      FUNCTION 11
        0.000        0.000       0.005       -0.321       0.010       -0.319
        0.015       -0.318       0.020       -0.316       0.025       -0.316
        0.030       -0.317       0.035       -0.319       0.040       -0.323
        0.045       -0.328       0.050       -0.335       0.055       -0.342
        0.060       -0.350       0.065       -0.358       0.070       -0.367
        0.075       -0.376       0.080       -0.385       0.085       -0.394
        0.090       -0.404       0.095       -0.413       0.100       -0.423
        0.105       -0.433       0.110       -0.444       0.115       -0.454
        0.120       -0.465       0.125       -0.476       0.130       -0.487
        0.135       -0.499       0.140       -0.511       0.145       -0.523
        0.150       -0.535       0.155       -0.548       0.160       -0.560
        0.165       -0.573       0.170       -0.587       0.175       -0.600
        0.180       -0.614       0.185       -0.628       0.190       -0.642
        0.195       -0.656       0.200       -0.671       0.205       -0.686
        0.210       -0.701       0.215       -0.716       0.220       -0.731
        0.225       -0.747       0.230       -0.763       0.235       -0.778
        0.240       -0.794       0.245       -0.810       0.250       -0.826
        0.255       -0.842       0.260       -0.859       0.265       -0.875
        0.270       -0.891       0.275       -0.907       0.280       -0.924
        0.285       -0.940       0.290       -0.956       0.295       -0.973
        0.300       -0.989       0.305       -1.006       0.310       -1.022
        0.315       -1.039       0.320       -1.056       0.325       -1.073
        0.330       -1.090       0.335       -1.107       0.340       -1.124
        0.345       -1.141       0.350       -1.158       0.355       -1.176
        0.360       -1.194       0.365       -1.212       0.370       -1.230
        0.375       -1.248       0.380       -1.267       0.385       -1.286
        0.390       -1.305       0.395       -1.324       0.400       -1.343
        0.405       -1.362       0.410       -1.382       0.415       -1.402
        0.420       -1.422       0.425       -1.442       0.430       -1.462
        0.435       -1.483       0.440       -1.503       0.445       -1.524
        0.450       -1.544       0.455       -1.565       0.460       -1.585
        0.465       -1.606       0.470       -1.627       0.475       -1.647
        0.480       -1.668       0.485       -1.689       0.490       -1.710
        0.495       -1.730       0.500       -1.751       0.505       -1.772
        0.510       -1.792       0.515       -1.813       0.520       -1.834
        0.525       -1.855       0.530       -1.876       0.535       -1.896
        0.540       -1.917       0.545       -1.938       0.550       -1.959
        0.555       -1.981       0.560       -2.002       0.565       -2.023
        0.570       -2.045       0.575       -2.066       0.580       -2.088
        0.585       -2.110       0.590       -2.132       0.595       -2.154
        0.600       -2.176       0.605       -2.198       0.610       -2.221
        0.615       -2.243       0.620       -2.266       0.625       -2.289
```

0.630	-2.312	0.635	-2.335	0.640	-2.359
0.645	-2.382	0.650	-2.406	0.655	-2.430
0.660	-2.454	0.665	-2.479	0.670	-2.503
0.675	-2.528	0.680	-2.553	0.685	-2.578
0.690	-2.603	0.695	-2.629	0.700	-2.655
0.705	-2.681	0.710	-2.708	0.715	-2.734
0.720	-2.761	0.725	-2.789	0.730	-2.816
0.735	-2.844	0.740	-2.873	0.745	-2.901
0.750	-2.930	0.755	-2.959	0.760	-2.989
0.765	-3.019	0.770	-3.049	0.775	-3.080
0.780	-3.111	0.785	-3.142	0.790	-3.174
0.795	-3.206	0.800	-3.239	0.805	-3.272
0.810	-3.305	0.815	-3.339	0.820	-3.373
0.825	-3.407	0.830	-3.442	0.835	-3.477
0.840	-3.512	0.845	-3.548	0.850	-3.584
0.855	-3.621	0.860	-3.658	0.865	-3.695
0.870	-3.733	0.875	-3.771	0.880	-3.810
0.885	-3.849	0.890	-3.886	0.895	-3.928
0.900	-3.968	0.905	-4.008	0.910	-4.049
0.915	-4.091	0.920	-4.133	0.925	-4.175
0.930	-4.218	0.935	-4.261	0.940	-4.305
0.945	-4.349	0.950	-4.393	0.955	-4.438
0.960	-4.484	0.965	-4.530	0.970	-4.576
0.975	-4.623	0.980	-4.671	0.985	-4.719
0.990	-4.767	0.995	-4.817	1.000	-4.866
1.005	-4.916	1.010	-4.967	1.015	-5.018
1.020	-5.070	1.025	-5.122	1.030	-5.175
1.035	-5.229	1.040	-5.283	1.045	-5.337
1.050	-5.392	1.055	-5.448	1.060	-5.505
1.065	-5.562	1.070	-5.619	1.075	-5.677
1.080	-5.736	1.085	-5.796	1.090	-5.856
1.095	-5.917	1.100	-5.978	1.105	-6.040
1.110	-6.103	1.115	-6.167	1.120	-6.231
1.125	-6.296	1.130	-6.362	1.135	-6.428
1.140	-6.495	1.145	-6.563	1.150	-6.631
1.155	-6.701	1.160	-6.771	1.165	-6.842
1.170	-6.913	1.175	-6.986	1.180	-7.059
1.185	-7.133	1.190	-7.208	1.195	-7.284
1.200	-7.360	1.205	-7.438	1.210	-7.516
1.215	-7.595	1.220	-7.675	1.225	-7.756
1.230	-7.838	1.235	-7.921	1.240	-8.004
1.245	-8.089	1.250	-8.175	1.255	-8.261
1.260	-8.349	1.265	-8.437	1.270	-8.527
1.275	-8.617	1.280	-8.709	1.285	-8.801
1.290	-8.895	1.295	-8.990	1.300	-9.085
1.305	-9.182	1.310	-9.281	1.315	-9.380
1.320	-9.480	1.325	-9.582	1.330	-9.685
1.335	-9.789	1.340	-9.894	1.345	-10.000
1.350	-10.108	1.355	-10.217	1.360	-10.328
1.365	-10.440	1.370	-10.553	1.375	-10.667
1.380	-10.783	1.385	-10.901	1.390	-11.019
1.395	-11.140	1.400	-11.261	1.405	-11.385
1.410	-11.509	1.415	-11.636	1.420	-11.764
1.425	-11.893	1.430	-12.025	1.435	-12.158
1.440	-12.292	1.445	-12.429	1.450	-12.567
1.455	-12.707	1.460	-12.848	1.465	-12.992
1.470	-13.137	1.475	-13.285	1.480	-13.434
1.485	-13.585	1.490	-13.738	1.495	-13.893
1.500	-14.051	1.505	-14.210	1.510	-14.372
1.515	-14.535	1.520	-14.701	1.525	-14.869
1.530	-15.040	1.535	-15.212	1.540	-15.388
1.545	-15.565	1.550	-15.745	1.555	-15.927
1.560	-16.112	1.565	-16.300	1.570	-16.490
1.575	-16.683	1.580	-16.878	1.585	-17.076
1.590	-17.277	1.595	-17.481	1.600	-17.688
1.605	-17.897	1.610	-18.110	1.615	-18.326

1.620	-18.544	1.625	-18.766	1.630	-18.992
1.635	-19.220	1.640	-19.452	1.645	-19.687
1.650	-19.925	1.655	-20.167	1.660	-20.413
1.665	-20.662	1.670	-20.915	1.675	-21.172
1.680	-21.433	1.685	-21.697	1.690	-21.966
1.695	-22.238	1.700	-22.515	1.705	-22.796
1.710	-23.081	1.715	-23.370	1.720	-23.664
1.725	-23.963	1.730	-24.266	1.735	-24.574
1.740	-24.886	1.745	-25.204	1.750	-25.526
1.755	-25.854	1.760	-26.186	1.765	-26.524
1.770	-26.867	1.775	-27.216	1.780	-27.570
1.785	-27.930	1.790	-28.296	1.795	-28.668
1.800	-29.046	1.805	-29.430	1.810	-29.820
1.815	-30.216	1.820	-30.619	1.825	-31.029
1.830	-31.445	1.835	-31.869	1.840	-32.299
1.845	-32.737	1.850	-33.182	1.855	-33.634
1.860	-34.094	1.865	-34.562	1.870	-35.038
1.875	-35.522	1.880	-36.014	1.885	-36.515
1.890	-37.024	1.895	-37.542	1.900	-38.069
1.905	-38.605	1.910	-39.151	1.915	-39.706
1.920	-40.271	1.925	-40.846	1.930	-41.431
1.935	-42.026	1.940	-42.632	1.945	-43.249
1.950	-43.877	1.955	-44.517	1.960	-45.168
1.965	-45.831	1.970	-46.505	1.975	-47.193
1.980	-47.892	1.985	-48.605	1.990	-49.331
1.995	-50.070	2.000	-50.823	2.005	-51.591
2.010	-52.372	2.015	-53.169	2.020	-53.980
2.025	-54.807	2.030	-55.649	2.035	-56.508
2.040	-57.383	2.045	-58.275	2.050	-59.184
2.055	-60.110	2.060	-61.055	2.065	-62.018
2.070	-63.000	2.075	-64.002	2.080	-65.023
2.085	-66.064	2.090	-67.126	2.095	-68.210
2.100	-69.315	2.105	-70.442	2.110	-71.592
2.115	-72.766	2.120	-73.963	2.125	-75.185
2.130	-76.431	2.135	-77.704	2.140	-79.002
2.145	-80.328	2.150	-81.681	2.155	-83.063
2.160	-84.473	2.165	-85.913	2.170	-87.384
2.175	-88.886	2.180	-90.420	2.185	-91.986
2.190	-93.586	2.195	-95.221	2.200	-96.891
2.205	-98.597	2.210	-100.340	2.215	-102.120
2.220	-103.940	2.225	-105.800	2.230	-107.710
2.235	-109.650	2.240	-111.640	2.245	-113.670
2.250	-115.750	2.255	-117.870	2.260	-120.050
2.265	-122.270	2.270	-124.540	2.275	-126.870
2.280	-129.240	2.285	-131.680	2.290	-134.170
2.295	-136.710	2.300	-139.320	2.305	-141.990
2.310	-144.720	2.315	-147.520	2.320	-150.380
2.325	-153.310	2.330	-156.310	2.335	-159.380
2.340	-162.530	2.345	-165.750	2.350	-169.050
2.355	-172.430	2.360	-175.900	2.365	-179.450
2.370	-183.080	2.375	-186.810	2.380	-190.630
2.385	-194.540	2.390	-198.550	2.395	-202.670
2.400	-206.880	2.405	-211.210	2.410	-215.640
2.415	-220.180	2.420	-224.850	2.425	-229.630
2.430	-234.530	2.435	-239.570	2.440	-244.730
2.445	-250.030	2.450	-255.460	2.455	-261.040
2.460	-266.770	2.465	-272.650	2.470	-278.680
2.475	-284.880	2.480	-291.230	2.485	-297.760
2.490	-304.470	2.495	-311.360	2.500	-318.430
2.505	-325.690	2.510	-333.160	2.515	-340.820
2.520	-348.700	2.525	-356.800	2.530	-365.110
2.535	-373.660	2.540	-382.450	2.545	-391.480
2.550	-400.760	2.555	-410.300	2.560	-420.110
2.565	-430.190	2.570	-440.570	2.575	-451.230
2.580	-462.200	2.585	-473.470	2.590	-485.070
2.595	-497.010	2.600	-509.280	2.605	-521.900

2.610	-534.890	2.615	-548.260	2.620	-562.000
2.625	-576.150	2.630	-590.710	2.635	-605.680
2.640	-621.100	2.645	-636.960	2.650	-653.280
2.655	-670.080	2.660	-687.370	2.665	-705.160
2.670	-723.480	2.675	-742.330	2.680	-761.730
2.685	-781.700	2.690	-802.250	2.695	-823.400
2.700	-845.180	2.705	-867.590	2.710	-890.650
2.715	-914.390	2.720	-938.820	2.725	-963.960
2.730	-989.830	2.735	-1016.500	2.740	-1043.900
2.745	-1072.000	2.750	-1101.000	2.755	-1130.900
2.760	-1161.600	2.765	-1193.100	2.770	-1225.600
2.775	-1259.000	2.780	-1293.300	2.785	-1328.600
2.790	-1364.900	2.795	-1402.200	2.800	-1440.500
2.805	-1479.800	2.810	-1520.300	2.815	-1561.800
2.820	-1604.500	2.825	-1648.300	2.830	-1693.300
2.835	-1739.400	2.840	-1786.700	2.845	-1835.300
2.850	-1885.100	2.855	-1936.100	2.860	-1988.500
2.865	-2042.100	2.870	-2097.000	2.875	-2153.200
2.880	-2210.800	2.885	-2269.600	2.890	-2329.900
2.895	-2391.400	2.900	-2454.400	2.905	-2518.700
2.910	-2584.300	2.915	-2651.300	2.920	-2719.600
2.925	-2789.300	2.930	-2860.400	2.935	-2932.700
2.940	-3006.400	2.945	-3081.300	2.950	-3157.400
2.955	-3234.800	2.960	-3313.400	2.965	-3392.900
2.970	-3472.800	2.975	-3553.200	2.980	-3633.700
2.985	-3714.200	2.990	-3794.000	2.995	-3871.800
3.000	-3943.600	3.005	-3990.500	3.010	-3939.000
3.015	-3654.700	3.020	-3018.900	3.025	-2024.200
3.030	-795.360	3.035	470.990	3.040	1589.800
3.045	2440.300	3.050	2975.800	3.055	3204.100
3.060	3161.500	3.065	2892.800	3.070	2442.500
3.075	1855.100	3.080	1177.600	3.085	461.340
3.090	-239.390	3.095	-871.840	3.100	-1390.200
3.105	-1760.700	3.110	-1964.200	3.115	-1997.400
3.120	-1871.300	3.125	-1608.800	3.130	-1241.500
3.135	-806.260	3.140	-342.010	3.145	113.380
3.150	525.680	3.155	866.550	3.160	1115.200
3.165	1259.600	3.170	1296.400	3.175	1231.100
3.180	1076.700	3.185	851.830	3.190	579.550
3.195	284.600	3.200	-8.425	3.205	-277.010
3.210	-502.310	3.215	-670.300	3.220	-772.480
3.225	-806.080	3.230	-773.850	3.235	-683.380
3.240	-546.160	3.245	-376.430	3.250	-189.780
3.255	-1.965	3.260	172.430	3.265	320.960
3.270	434.140	3.275	505.960	3.280	534.080
3.285	519.690	3.290	467.220	3.295	383.660
3.300	277.900	3.305	159.840	3.310	39.549
3.315	-73.492	3.320	-171.120	3.325	-246.980
3.330	-296.900	3.335	-319.060	3.340	-313.890
3.345	-283.910	3.350	-233.360	3.355	-167.750
3.360	-93.306	3.365	-16.472	3.370	56.631
3.375	120.640	3.380	171.320	3.385	205.780
3.390	222.620	3.395	221.890	3.400	205.020
3.405	174.570	3.410	133.930	3.415	87.042
3.420	38.013	3.425	-9.203	3.430	-51.097
3.435	-84.848	3.440	-108.480	3.445	-120.950
3.450	-122.170	3.455	-112.910	3.460	-94.701
3.465	-69.649	3.470	-40.218	3.475	-9.023
3.480	21.388	3.485	48.726	3.490	71.114
3.495	87.207	3.500	96.248	3.505	98.084
3.510	93.131	3.515	82.299	3.520	66.880
3.525	48.420	3.530	28.582	3.535	9.005
3.540	-8.819	3.545	-23.649	3.550	-34.573
3.555	-41.050	3.560	-42.925	3.565	-40.412
3.570	-34.044	3.575	-24.615	3.580	-13.090
3.585	-0.525	3.590	12.030	3.595	23.604

3.600	33.378	3.605	40.735	3.610	45.295
3.615	46.919	3.620	45.711	3.625	41.983
3.630	36.217	3.635	29.017	3.640	21.049
3.645	12.988	3.650	5.464	3.655	-0.984
3.660	-5.943	3.665	-9.144	3.670	-10.478
3.675	-9.988	3.680	-7.852	3.685	-4.365
3.690	0.098	3.695	5.117	3.700	10.259
3.705	15.118	3.710	19.338	3.715	22.643
3.720	24.847	3.725	25.866	3.730	25.711
3.735	24.485	3.740	22.365	3.745	19.583
3.750	16.406	3.755	13.109	3.760	9.954
3.765	7.175	3.770	4.957	3.775	3.426
3.780	2.646	3.785	2.620	3.790	3.290
3.795	4.550	3.800	6.256	3.805	8.241
3.810	10.328	3.815	12.349	3.820	14.152
3.825	15.613	3.830	16.646	3.835	17.203
3.840	17.278	3.845	16.901	3.850	16.136
3.855	15.072	3.860	13.813	3.865	12.471
3.870	11.156	3.875	9.966	3.880	8.984
3.885	8.268	3.890	7.852	3.895	7.745
3.900	7.930	3.905	8.370	3.910	9.010
3.915	9.785	3.920	10.623	3.925	11.455
3.930	12.216	3.935	12.852	3.940	13.323
3.945	13.604	3.950	13.689	3.955	13.585
3.960	13.314	3.965	12.909	3.970	12.412
3.975	11.868	3.980	11.321	3.985	10.813
3.990	10.380	3.995	10.050	4.000	9.838

3
3

DYNAMIC RESPONSES

D I S P L A C E M E N T M A X I M A,

NODE NUMBER	DISPLACEMENT COMPONENT	MAXIMUM VALUE	TIME AT MAXIMUM	PLOT SYMBOL
1	1	6.8904E-11	3.0110E+00	NA
1	2	1.5959E-10	3.0070E+00	NA
1	3	4.3368E-11	3.2680E+00	NA
1	4	3.5461E-11	3.2720E+00	NA
1	5	2.3097E-11	3.2240E+00	NA
1	6	1.6003E-11	3.2680E+00	NA
2	1	1.1242E-03	3.2230E+00	NA
2	2	4.0104E-04	3.2730E+00	NA
2	3	1.7212E-03	3.2700E+00	NA
2	4	6.2888E-05	3.2710E+00	NA
2	5	4.9407E-05	3.2240E+00	NA
2	6	4.4937E-05	3.0110E+00	NA
3	1	4.0353E-03	3.0110E+00	NA
3	2	4.1071E-04	3.1730E+00	NA
3	3	5.7424E-03	3.2700E+00	NA
3	4	6.6917E-05	3.2710E+00	NA
3	5	5.7507E-05	3.2240E+00	NA
3	6	4.9885E-05	3.0100E+00	NA
4	1	5.2106E-03	3.0110E+00	NA
4	2	7.4501E-04	3.0140E+00	NA
4	3	8.8700E-03	3.2700E+00	NA
4	4	4.4719E-05	3.2730E+00	NA
4	5	7.8236E-05	3.1180E+00	NA
4	6	1.4506E-05	3.0610E+00	NA
5	1	5.2178E-03	3.0110E+00	NA
5	2	1.0111E-03	3.0580E+00	NA
5	3	1.0051E-02	3.2700E+00	NA
5	4	3.6591E-05	3.2740E+00	NA
5	5	8.3441E-05	3.0120E+00	NA
5	6	9.0338E-06	3.0610E+00	NA
6	1	5.2248E-03	3.0110E+00	NA
6	2	1.1984E-03	3.0590E+00	NA
6	3	1.1112E-02	3.2700E+00	NA
6	4	2.8906E-05	3.3080E+00	NA
6	5	9.2403E-05	3.0100E+00	NA
6	6	3.9218E-06	3.0590E+00	NA
7	1	5.2267E-03	3.0110E+00	NA
7	2	1.2570E-03	3.0590E+00	NA
7	3	1.1953E-02	3.2240E+00	NA
7	4	2.7339E-05	3.3080E+00	NA
7	5	9.5016E-05	3.0100E+00	NA
7	6	3.0270E-06	3.0360E+00	NA
8	1	5.2285E-03	3.0110E+00	NA
8	2	1.2949E-03	3.0590E+00	NA
8	3	1.2980E-02	3.2240E+00	NA
8	4	2.5773E-05	3.3080E+00	NA
8	5	9.7873E-05	3.0100E+00	NA
8	6	3.2250E-06	3.0390E+00	NA
9	1	5.2381E-03	3.0110E+00	NA
9	2	1.2476E-03	3.0580E+00	NA
9	3	1.5914E-02	3.2240E+00	NA
9	4	2.8326E-05	3.0550E+00	NA
9	5	1.1922E-04	3.0090E+00	NA
9	6	5.1483E-06	3.1170E+00	NA
10	1	2.2758E-10	3.2710E+00	NA
10	2	4.5016E-11	3.2640E+00	NA
10	3	1.9244E-02	3.2240E+00	NA
10	4	4.0044E-05	3.0590E+00	NA
10	5	1.8712E-04	3.0670E+00	NA
10	6	1.4061E-05	3.2710E+00	NA

11	1	1.2400E-02	3.2240E+00	NA
11	2	2.6795E-03	3.0590E+00	NA
11	3	1.9193E-02	3.2240E+00	NA
11	4	2.7022E-05	3.0600E+00	NA
11	5	1.2212E-04	3.2250E+00	NA
11	6	1.3963E-05	3.2740E+00	NA
12	1	1.4462E-02	3.2240E+00	NA
12	2	3.2780E-03	3.0590E+00	NA
12	3	1.9121E-02	3.2240E+00	NA
12	4	1.7262E-05	3.0610E+00	NA
12	5	1.0290E-04	3.0670E+00	NA
12	6	1.4262E-05	3.2750E+00	NA
13	1	1.1910E-02	3.2240E+00	NA
13	2	2.8362E-03	3.0590E+00	NA
13	3	1.9100E-02	3.2240E+00	NA
13	4	2.9339E-05	3.0610E+00	NA
13	5	1.6438E-04	3.2250E+00	NA
13	6	1.4342E-05	3.2750E+00	NA
14	1	8.7726E-11	3.2720E+00	NA
14	2	2.2216E-10	3.0070E+00	NA
14	3	3.2330E-10	3.0630E+00	NA
14	4	2.1623E-10	3.2700E+00	NA
14	5	4.5899E-11	3.0650E+00	NA
14	6	9.2090E-11	3.0630E+00	NA
15	1	2.2800E-03	3.2240E+00	NA
15	2	3.1375E-03	3.2700E+00	NA
15	3	9.1952E-03	3.2700E+00	NA
15	4	4.0136E-04	3.2700E+00	NA
15	5	1.3298E-04	3.2700E+00	NA
15	6	6.5979E-05	3.2230E+00	NA
16	1	6.8077E-03	3.2240E+00	NA
16	2	3.1374E-03	3.2700E+00	NA
16	3	3.5191E-02	3.2700E+00	NA
16	4	4.3717E-04	3.2700E+00	NA
16	5	1.1490E-04	3.2240E+00	NA
16	6	7.7192E-05	3.2240E+00	NA
17	1	8.7762E-03	3.2240E+00	NA
17	2	1.6691E-03	3.2720E+00	NA
17	3	4.6942E-02	3.2700E+00	NA
17	4	2.7400E-04	3.2700E+00	NA
17	5	9.0102E-05	3.1200E+00	NA
17	6	3.3932E-05	3.2650E+00	NA
18	1	8.7969E-03	3.2240E+00	NA
18	2	1.3618E-03	3.1200E+00	NA
18	3	4.3997E-02	3.2700E+00	NA
18	4	2.2681E-04	3.2700E+00	NA
18	5	1.2283E-04	3.2700E+00	NA
18	6	2.7196E-05	3.2640E+00	NA
19	1	8.8152E-03	3.2240E+00	NA
19	2	1.5351E-03	3.1210E+00	NA
19	3	3.9609E-02	3.2700E+00	NA
19	4	1.7963E-04	3.2690E+00	NA
19	5	1.7149E-04	3.2700E+00	NA
19	6	2.0717E-05	3.2640E+00	NA
20	1	8.8195E-03	3.2240E+00	NA
20	2	1.6616E-03	3.2270E+00	NA
20	3	3.6552E-02	3.0640E+00	NA
20	4	1.6769E-04	3.2690E+00	NA
20	5	1.8369E-04	3.2700E+00	NA
20	6	1.9125E-05	3.2640E+00	NA
21	1	8.8227E-03	3.2240E+00	NA
21	2	1.8631E-03	3.2280E+00	NA
21	3	3.3664E-02	3.0640E+00	NA
21	4	1.5575E-04	3.2690E+00	NA
21	5	1.9410E-04	3.2700E+00	NA
21	6	1.7643E-05	3.2650E+00	NA

22	1	8.8362E-03	3.2240E+00	NA
22	2	2.1636E-03	3.0590E+00	NA
22	3	2.2371E-02	3.2240E+00	NA
22	4	6.2359E-05	3.0620E+00	NA
22	5	2.1208E-04	3.2700E+00	NA
22	6	1.3543E-05	3.2750E+00	NA
23	1	8.8382E-03	3.2240E+00	NA
23	2	2.2886E-03	3.0590E+00	NA
23	3	1.9084E-02	3.2240E+00	NA
23	4	3.7319E-05	3.0610E+00	NA
23	5	2.0559E-04	3.2250E+00	NA
23	6	1.4390E-05	3.2750E+00	NA
24	1	4.9329E-03	3.2240E+00	NA
24	2	1.7052E-03	3.5530E+00	NA
24	3	1.9063E-02	3.2240E+00	NA
24	4	3.6411E-05	3.0610E+00	NA
24	5	2.6276E-04	3.2240E+00	NA
24	6	1.5073E-05	3.2760E+00	NA
25	1	3.2577E-09	3.0060E+00	NA
25	2	1.2540E-03	3.5540E+00	NA
25	3	1.9040E-02	3.2240E+00	NA
25	4	3.5684E-05	3.0600E+00	NA
25	5	3.2384E-04	3.2240E+00	NA
25	6	1.5780E-05	3.2760E+00	NA
26	1	1.9961E-02	3.0090E+00	NA
26	2	3.0228E-11	3.3060E+00	NA
26	3	6.8198E-10	3.0180E+00	NA
26	4	3.2466E-05	3.0590E+00	NA
26	5	4.1249E-04	3.1190E+00	NA
26	6	1.6338E-05	3.2780E+00	NA
27	1	2.0522E-02	3.0090E+00	NA
27	2	7.2820E-04	3.2780E+00	NA
27	3	1.8236E-02	3.1200E+00	NA
27	4	3.0660E-05	3.0590E+00	NA
27	5	3.1598E-04	3.1200E+00	NA
27	6	1.2726E-05	3.4540E+00	NA
28	1	2.1058E-02	3.0090E+00	NA
28	2	1.2223E-03	3.4540E+00	NA
28	3	3.0495E-02	3.1200E+00	NA
28	4	2.8928E-05	3.0590E+00	NA
28	5	1.9396E-04	3.1210E+00	NA
28	6	8.2761E-06	3.4540E+00	NA
29	1	2.1593E-02	3.0080E+00	NA
29	2	1.4775E-03	3.4540E+00	NA
29	3	3.6421E-02	3.1200E+00	NA
29	4	2.7196E-05	3.0590E+00	NA
29	5	5.6198E-05	3.1240E+00	NA
29	6	2.2667E-06	3.3560E+00	NA
30	1	2.2128E-02	3.0080E+00	NA
30	2	1.4167E-03	3.4540E+00	NA
30	3	3.5462E-02	3.1210E+00	NA
30	4	2.5463E-05	3.0590E+00	NA
30	5	9.4104E-05	3.0570E+00	NA
30	6	5.1376E-06	3.2770E+00	NA
31	1	2.2661E-02	3.0080E+00	NA
31	2	1.0637E-03	3.4540E+00	NA
31	3	2.7881E-02	3.1210E+00	NA
31	4	2.3731E-05	3.0590E+00	NA
31	5	2.2439E-04	3.1200E+00	NA
31	6	9.6543E-06	3.4540E+00	NA
32	1	2.2805E-02	3.0080E+00	NA
32	2	7.8498E-04	3.4540E+00	NA
32	3	2.1392E-02	3.1210E+00	NA
32	4	2.3308E-05	3.0590E+00	NA
32	5	2.5208E-04	3.1200E+00	NA
32	6	1.0468E-05	3.4540E+00	NA

33	1	2.2949E-02	3.0080E+00	NA
33	2	4.8937E-04	3.4550E+00	NA
33	3	1.4198E-02	3.1220E+00	NA
33	4	2.2886E-05	3.0590E+00	NA
33	5	2.7512E-04	3.1210E+00	NA
33	6	1.0786E-05	3.4540E+00	NA
34	1	2.3452E-02	3.0080E+00	NA
34	2	5.1991E-11	3.3040E+00	NA
34	3	5.4460E-10	3.3750E+00	NA
34	4	2.1227E-05	3.0590E+00	NA
34	5	3.3741E-04	3.1230E+00	NA
34	6	9.0281E-06	3.3550E+00	NA
35	1	2.4523E-02	3.0070E+00	NA
35	2	5.8231E-04	3.3560E+00	NA
35	3	3.4323E-02	3.1710E+00	NA
35	4	1.7689E-05	3.0590E+00	NA
35	5	3.3097E-04	3.1700E+00	NA
35	6	7.3794E-06	3.3050E+00	NA
36	1	2.5591E-02	3.0070E+00	NA
36	2	1.1240E-03	3.3050E+00	NA
36	3	5.6630E-02	3.1710E+00	NA
36	4	1.4230E-05	3.5810E+00	NA
36	5	7.8857E-05	3.1700E+00	NA
36	6	5.4428E-06	3.3040E+00	NA
37	1	2.6126E-02	3.0070E+00	NA
37	2	1.2901E-03	3.3050E+00	NA
37	3	5.5905E-02	3.1710E+00	NA
37	4	1.2848E-05	3.5810E+00	NA
37	5	1.4150E-04	3.1270E+00	NA
37	6	1.9593E-06	3.4560E+00	NA
38	1	2.6129E-02	3.0070E+00	NA
38	2	1.2820E-03	3.3050E+00	NA
38	3	6.2531E-02	3.1710E+00	NA
38	4	1.2848E-05	3.5810E+00	NA
38	5	1.3584E-04	3.1270E+00	NA
38	6	1.9379E-06	3.3570E+00	NA
39	1	2.6129E-02	3.0070E+00	NA
39	2	1.2805E-03	3.3050E+00	NA
39	3	6.8905E-02	3.1700E+00	NA
39	4	1.2848E-05	3.5810E+00	NA
39	5	1.5919E-04	3.1270E+00	NA
39	6	1.9410E-06	3.3580E+00	NA
40	1	2.6129E-02	3.0070E+00	NA
40	2	1.2800E-03	3.3050E+00	NA
40	3	7.0565E-02	3.1700E+00	NA
40	4	1.2848E-05	3.5810E+00	NA
40	5	1.5922E-04	3.1270E+00	NA
40	6	1.9411E-06	3.3580E+00	NA
41	1	2.6780E-02	3.0060E+00	NA
41	2	1.1612E-03	3.3050E+00	NA
41	3	4.3419E-02	3.1710E+00	NA
41	4	1.1149E-05	3.5810E+00	NA
41	5	2.7290E-04	3.1700E+00	NA
41	6	4.6478E-06	3.3050E+00	NA
42	1	2.7438E-02	3.0060E+00	NA
42	2	7.4155E-04	3.3050E+00	NA
42	3	2.3993E-02	3.1710E+00	NA
42	4	9.4771E-06	3.5800E+00	NA
42	5	3.3948E-04	3.1710E+00	NA
42	6	8.7286E-06	3.3050E+00	NA
43	1	2.7962E-02	3.0060E+00	NA
43	2	2.6233E-04	3.3050E+00	NA
43	3	7.4547E-03	3.1720E+00	NA
43	4	8.1627E-06	3.5790E+00	NA
43	5	3.1722E-04	3.1720E+00	NA
43	6	1.0506E-05	3.3050E+00	NA

44	1	2.8222E-02	3.0060E+00	NA
44	2	1.1315E-11	3.4290E+00	NA
44	3	1.5621E-09	3.0020E+00	NA
44	4	7.5264E-06	3.5790E+00	NA
44	5	3.0198E-04	3.1140E+00	NA
44	6	1.0782E-05	3.3050E+00	NA
45	1	2.4797E-02	3.5920E+00	NA
45	2	4.7295E-04	3.3040E+00	NA
45	3	1.4092E-02	3.0030E+00	NA
45	4	4.1442E-06	3.5270E+00	NA
45	5	2.8939E-04	3.4940E+00	NA
45	6	9.9546E-06	3.3060E+00	NA
46	1	3.8675E-02	3.4950E+00	NA
46	2	6.0450E-04	3.9580E+00	NA
46	3	1.4534E-02	3.0030E+00	NA
46	4	2.8880E-06	3.4600E+00	NA
46	5	1.8255E-04	3.4060E+00	NA
46	6	8.8568E-06	3.3060E+00	NA
47	1	4.2659E-02	3.4950E+00	NA
47	2	6.5987E-04	3.4660E+00	NA
47	3	1.4589E-02	3.0030E+00	NA
47	4	2.5940E-06	3.4600E+00	NA
47	5	1.6280E-04	3.4070E+00	NA
47	6	8.7357E-06	3.3060E+00	NA
48	1	4.6251E-02	3.4490E+00	NA
48	2	7.1619E-04	3.4650E+00	NA
48	3	1.4643E-02	3.0030E+00	NA
48	4	2.2288E-06	3.4600E+00	NA
48	5	1.3832E-04	3.4070E+00	NA
48	6	8.5456E-06	3.3060E+00	NA
49	1	4.2663E-02	3.4950E+00	NA
49	2	8.9919E-04	3.9600E+00	NA
49	3	1.8675E-02	3.0040E+00	NA
49	4	2.5940E-06	3.4600E+00	NA
49	5	1.6294E-04	3.4070E+00	NA
49	6	8.7608E-06	3.3060E+00	NA
50	1	4.8149E-02	3.4490E+00	NA
50	2	7.6131E-04	3.4630E+00	NA
50	3	1.4951E-02	3.0030E+00	NA
50	4	1.6616E-06	3.5790E+00	NA
50	5	9.5198E-05	3.5930E+00	NA
50	6	7.2755E-06	3.3070E+00	NA
51	1	3.6004E-02	3.4480E+00	NA
51	2	5.8695E-04	3.4620E+00	NA
51	3	1.5255E-02	3.0020E+00	NA
51	4	3.8641E-06	3.4630E+00	NA
51	5	2.5138E-04	3.4490E+00	NA
51	6	6.6380E-06	3.8990E+00	NA
52	1	2.8921E-02	3.4470E+00	NA
52	2	4.7683E-04	3.4620E+00	NA
52	3	1.5308E-02	3.0020E+00	NA
52	4	4.2430E-06	3.4630E+00	NA
52	5	2.7113E-04	3.4490E+00	NA
52	6	6.5699E-06	3.8990E+00	NA
53	1	2.1349E-02	3.4470E+00	NA
53	2	3.5668E-04	3.4620E+00	NA
53	3	1.5361E-02	3.0020E+00	NA
53	4	4.5433E-06	3.4630E+00	NA
53	5	2.8506E-04	3.4480E+00	NA
53	6	6.4307E-06	3.8990E+00	NA
54	1	2.8923E-02	3.4470E+00	NA
54	2	6.3041E-04	3.5190E+00	NA
54	3	1.3908E-02	3.0030E+00	NA
54	4	4.2430E-06	3.4630E+00	NA
54	5	2.7128E-04	3.4490E+00	NA
54	6	6.5959E-06	3.8990E+00	NA

55	1	8.1452E-10	3.0020E+00	NA
55	2	1.5424E-11	3.8970E+00	NA
55	3	1.5647E-02	3.0020E+00	NA
55	4	5.1681E-06	3.4620E+00	NA
55	5	2.9931E-04	3.4450E+00	NA
55	6	5.5649E-06	3.8980E+00	NA
56	1	9.1483E-03	3.4430E+00	NA
56	2	1.8870E-04	3.5660E+00	NA
56	3	1.1919E-02	3.0020E+00	NA
56	4	4.6285E-06	3.5190E+00	NA
56	5	1.1491E-04	3.4420E+00	NA
56	6	3.5082E-06	3.8970E+00	NA
57	1	9.1931E-03	3.4430E+00	NA
57	2	2.3780E-04	3.7440E+00	NA
57	3	1.1390E-02	3.1800E+00	NA
57	4	4.8348E-06	3.5190E+00	NA
57	5	6.5075E-05	3.4420E+00	NA
57	6	2.5285E-06	3.8970E+00	NA
58	1	9.2088E-03	3.4430E+00	NA
58	2	2.6486E-04	3.7440E+00	NA
58	3	1.1559E-02	3.1800E+00	NA
58	4	4.9070E-06	3.5180E+00	NA
58	5	5.3452E-05	3.0580E+00	NA
58	6	2.1074E-06	3.8970E+00	NA
59	1	9.2215E-03	3.4430E+00	NA
59	2	2.8631E-04	3.7690E+00	NA
59	3	1.1324E-02	3.1790E+00	NA
59	4	4.8984E-06	3.5180E+00	NA
59	5	4.3765E-05	3.0580E+00	NA
59	6	1.6337E-06	3.8970E+00	NA
60	1	7.5086E-03	3.4440E+00	NA
60	2	3.8217E-04	3.8970E+00	NA
60	3	1.1561E-02	3.1800E+00	NA
60	4	4.9365E-06	3.5180E+00	NA
60	5	5.3298E-05	3.0580E+00	NA
60	6	2.1074E-06	3.8970E+00	NA
61	1	9.2593E-03	3.4430E+00	NA
61	2	2.9954E-04	3.8700E+00	NA
61	3	9.4038E-03	3.1790E+00	NA
61	4	4.8641E-06	3.5180E+00	NA
61	5	7.0644E-05	3.1800E+00	NA
61	6	1.0926E-06	3.4640E+00	NA
62	1	9.2690E-03	3.4430E+00	NA
62	2	2.7948E-04	3.8700E+00	NA
62	3	7.3118E-03	3.1790E+00	NA
62	4	4.8773E-06	3.8980E+00	NA
62	5	8.1656E-05	3.1790E+00	NA
62	6	1.4377E-06	3.7440E+00	NA
63	1	9.2746E-03	3.4430E+00	NA
63	2	2.5104E-04	3.8960E+00	NA
63	3	6.0270E-03	3.0130E+00	NA
63	4	4.7902E-06	3.8970E+00	NA
63	5	8.8203E-05	3.1790E+00	NA
63	6	1.7217E-06	3.7440E+00	NA
64	1	1.0591E-02	3.4430E+00	NA
64	2	4.5261E-04	3.8970E+00	NA
64	3	7.3136E-03	3.1790E+00	NA
64	4	4.9152E-06	3.8980E+00	NA
64	5	8.2343E-05	3.1790E+00	NA
64	6	1.4377E-06	3.7440E+00	NA
65	1	9.2820E-03	3.4430E+00	NA
65	2	2.1966E-04	3.8960E+00	NA
65	3	5.6925E-03	3.0120E+00	NA
65	4	4.6210E-06	3.8970E+00	NA
65	5	9.3768E-05	3.1790E+00	NA
65	6	2.0732E-06	3.7440E+00	NA

66	1	7.4093E-03	3.4440E+00	NA
66	2	1.3545E-11	3.7950E+00	NA
66	3	5.5890E-03	3.0060E+00	NA
66	4	2.7061E-06	3.8970E+00	NA
66	5	4.9624E-05	3.1790E+00	NA
66	6	2.3443E-06	3.7440E+00	NA
67	1	6.0691E-03	3.4910E+00	NA
67	2	1.3470E-04	3.7960E+00	NA
67	3	4.0704E-03	3.0060E+00	NA
67	4	5.7054E-07	3.7960E+00	NA
67	5	2.8127E-05	3.4440E+00	NA
67	6	1.5585E-06	3.7440E+00	NA
68	1	5.5467E-03	3.4900E+00	NA
68	2	1.4284E-04	3.7960E+00	NA
68	3	3.6905E-03	3.0060E+00	NA
68	4	1.6604E-07	3.6940E+00	NA
68	5	2.5998E-05	3.4440E+00	NA
68	6	1.3917E-06	3.7440E+00	NA
69	1	3.2893E-03	3.4890E+00	NA
69	2	1.1533E-04	3.7960E+00	NA
69	3	2.4602E-03	3.0060E+00	NA
69	4	6.3484E-07	3.7960E+00	NA
69	5	2.6627E-05	3.4910E+00	NA
69	6	9.2780E-07	3.7440E+00	NA
70	1	1.0759E-03	3.4890E+00	NA
70	2	4.4327E-05	3.7960E+00	NA
70	3	1.2300E-03	3.0060E+00	NA
70	4	7.5034E-07	3.7960E+00	NA
70	5	2.0239E-05	3.4890E+00	NA
70	6	4.6390E-07	3.7440E+00	NA
71	1	7.7291E-11	3.0350E+00	NA
71	2	4.3694E-12	3.7960E+00	NA
71	3	6.0679E-09	3.0060E+00	NA
71	4	5.0688E-12	3.7960E+00	NA
71	5	1.1646E-10	3.4880E+00	NA
71	6	1.4963E-12	3.7440E+00	NA

S T R E S S C O M P O N E N T M A X I M A

ELEMENT TYPE NUMBER 1

ELEMENT NUMBER	STRESS COMPONENT	MAXIMUM VALUE	TIME AT MAXIMUM	PLOT SYMBOL
1	1	6.8904E+02	3.0110E+00	NA
2	1	1.5959E+03	3.0070E+00	NA
3	1	4.3368E+02	3.2680E+00	NA
4	2	3.5461E+04	3.2720E+00	NA
5	2	2.3097E+04	3.2240E+00	NA
6	2	1.6003E+04	3.2680E+00	NA
7	1	2.2758E+03	3.2710E+00	NA
8	1	4.5016E+02	3.2640E+00	NA
9	1	8.7726E+02	3.2720E+00	NA
10	1	2.2216E+03	3.0070E+00	NA
11	1	3.2330E+03	3.0630E+00	NA
12	2	2.1623E+05	3.2700E+00	NA
13	2	4.5899E+04	3.0650E+00	NA
14	2	9.2090E+04	3.0630E+00	NA
15	1	3.2577E+04	3.0060E+00	NA
16	1	3.0228E+02	3.3060E+00	NA
17	1	6.8198E+03	3.0180E+00	NA
18	1	5.1991E+02	3.3040E+00	NA
19	1	5.4460E+03	3.3750E+00	NA
20	1	2.9396E+01	3.0070E+00	NA
21	1	3.3919E-01	3.3050E+00	NA
22	1	1.8700E+01	3.1700E+00	NA
23	1	1.1315E+02	3.4290E+00	NA
24	1	1.5621E+04	3.0020E+00	NA
25	1	8.1452E+03	3.0020E+00	NA
26	1	1.5424E+02	3.8970E+00	NA
27	1	1.3545E+02	3.7950E+00	NA
28	1	7.7291E+02	3.0350E+00	NA
29	1	4.3694E+01	3.7960E+00	NA
30	1	6.0679E+04	3.0060E+00	NA
31	2	5.0688E+03	3.7960E+00	NA
32	2	1.1646E+05	3.4880E+00	NA
33	2	1.4963E+03	3.7440E+00	NA

S T R E S S C O M P O N E N T M A X I M A

ELEMENT TYPE NUMBER = 2

ELEMENT NUMBER	STRESS COMPONENT	MAXIMUM VALUE	TIME AT MAXIMUM	PLOT SYMBOL
1	1	3.9562E+02	3.0110E+00	NA
1	2	1.5959E+03	3.0070E+00	NA
1	3	5.1221E+02	3.2690E+00	NA
1	4	3.6118E+04	3.2700E+00	NA
1	5	2.3097E+04	3.2240E+00	NA
1	6	1.7470E+04	3.0660E+00	NA
1	7	1.4062E+03	3.0070E+00	NA
1	8	8.5081E+02	3.0070E+00	NA
1	9	5.1221E+02	3.2690E+00	NA
1	10	1.6277E+04	3.2720E+00	NA
1	11	2.8736E+04	3.2250E+00	NA
1	12	1.7148E+04	3.0100E+00	NA
2	1	1.5944E+03	3.0060E+00	NA
2	2	4.2387E+02	3.2690E+00	NA
2	3	4.2701E+02	3.0690E+00	NA
2	4	1.4735E+04	3.1190E+00	NA
2	5	1.9255E+04	3.0670E+00	NA
2	6	1.7404E+04	3.2710E+00	NA
2	7	1.5944E+03	3.0060E+00	NA
2	8	4.2387E+02	3.2690E+00	NA
2	9	4.2701E+02	3.0690E+00	NA
2	10	1.4735E+04	3.1190E+00	NA
2	11	6.7112E+03	3.0180E+00	NA
2	12	9.9527E+03	3.0670E+00	NA
3	1	1.0020E+02	3.0070E+00	NA
3	2	4.1537E+02	3.0070E+00	NA
3	3	3.0102E+02	3.2690E+00	NA
3	4	1.4735E+04	3.1190E+00	NA
3	5	9.9527E+03	3.0670E+00	NA
3	6	6.7112E+03	3.0180E+00	NA
3	7	3.6456E+02	3.0070E+00	NA
3	8	2.5595E+02	3.0610E+00	NA
3	9	3.0102E+02	3.2690E+00	NA
3	10	1.5072E+04	3.0580E+00	NA
3	11	8.7387E+03	3.2680E+00	NA
3	12	1.4120E+04	3.0090E+00	NA
4	1	4.1173E+02	3.0050E+00	NA
4	2	9.9931E+01	3.0070E+00	NA
4	3	1.8849E+02	3.3580E+00	NA
4	4	1.7027E+04	3.2670E+00	NA
4	5	1.6638E+04	3.0090E+00	NA
4	6	1.5643E+04	3.0090E+00	NA
4	7	4.1173E+02	3.0050E+00	NA
4	8	9.9931E+01	3.0070E+00	NA
4	9	1.8849E+02	3.3580E+00	NA
4	10	1.7027E+04	3.2670E+00	NA
4	11	2.0565E+04	3.0070E+00	NA
4	12	1.3254E+04	3.0620E+00	NA
5	1	4.2399E+02	3.0590E+00	NA
5	2	1.0017E+02	3.0070E+00	NA
5	3	2.0762E+02	3.0700E+00	NA
5	4	1.7027E+04	3.2670E+00	NA
5	5	2.0565E+04	3.0070E+00	NA
5	6	1.3254E+04	3.0620E+00	NA
5	7	4.2399E+02	3.0590E+00	NA
5	8	1.0017E+02	3.0070E+00	NA
5	9	2.0762E+02	3.0700E+00	NA
5	10	1.7027E+04	3.2670E+00	NA

5	11	2.4538E+04	3.0060E+00	NA
5	12	1.2285E+04	3.0620E+00	NA
6	1	4.5681E+02	3.0590E+00	NA
6	2	1.0068E+02	3.0100E+00	NA
6	3	2.8875E+02	3.0690E+00	NA
6	4	1.7027E+04	3.2670E+00	NA
6	5	2.4538E+04	3.0060E+00	NA
6	6	1.2285E+04	3.0620E+00	NA
6	7	4.5681E+02	3.0590E+00	NA
6	8	1.0068E+02	3.0100E+00	NA
6	9	2.8875E+02	3.0690E+00	NA
6	10	1.7027E+04	3.2670E+00	NA
6	11	2.6953E+04	3.0050E+00	NA
6	12	1.1253E+04	3.0620E+00	NA
7	1	4.9825E+02	3.0590E+00	NA
7	2	1.0250E+02	3.1180E+00	NA
7	3	3.6920E+02	3.0690E+00	NA
7	4	1.7027E+04	3.2670E+00	NA
7	5	2.6953E+04	3.0050E+00	NA
7	6	1.1253E+04	3.0620E+00	NA
7	7	4.9825E+02	3.0590E+00	NA
7	8	1.0250E+02	3.1180E+00	NA
7	9	3.6920E+02	3.0690E+00	NA
7	10	1.7027E+04	3.2670E+00	NA
7	11	2.9424E+04	3.0060E+00	NA
7	12	9.5998E+03	3.0620E+00	NA
8	1	5.3779E+02	3.0590E+00	NA
8	2	1.3098E+02	3.1180E+00	NA
8	3	5.9072E+02	3.2700E+00	NA
8	4	1.7027E+04	3.2670E+00	NA
8	5	2.9424E+04	3.0060E+00	NA
8	6	9.5998E+03	3.0620E+00	NA
8	7	5.3779E+02	3.0590E+00	NA
8	8	1.3098E+02	3.1180E+00	NA
8	9	5.9072E+02	3.2700E+00	NA
8	10	1.7027E+04	3.2670E+00	NA
8	11	4.6133E+04	3.0690E+00	NA
8	12	3.5785E+03	3.0600E+00	NA
9	1	2.3019E+03	3.0170E+00	NA
9	2	8.1891E+02	3.2700E+00	NA
9	3	1.5552E+02	3.0610E+00	NA
9	4	1.7027E+04	3.2670E+00	NA
9	5	3.5785E+03	3.0600E+00	NA
9	6	4.6133E+04	3.0690E+00	NA
9	7	2.0377E+03	3.0190E+00	NA
9	8	1.4252E+03	3.0070E+00	NA
9	9	1.5552E+02	3.0610E+00	NA
9	10	1.1620E+04	3.2660E+00	NA
9	11	1.1421E+04	3.2690E+00	NA
9	12	4.1211E+04	3.2700E+00	NA
10	1	1.2006E+03	3.2280E+00	NA
10	2	5.4529E+02	3.2640E+00	NA
10	3	2.6341E+03	3.2250E+00	NA
10	4	3.6158E+03	3.1200E+00	NA
10	5	4.2120E+04	3.2710E+00	NA
10	6	1.4325E+04	3.2680E+00	NA
10	7	1.2006E+03	3.2280E+00	NA
10	8	5.4529E+02	3.2640E+00	NA
10	9	2.6341E+03	3.2250E+00	NA
10	10	3.6158E+03	3.1200E+00	NA
10	11	1.5702E+05	3.2240E+00	NA
10	12	3.1853E+04	3.0580E+00	NA
11	1	1.6826E+03	3.2270E+00	NA
11	2	4.6509E+02	3.2670E+00	NA
11	3	2.2666E+03	3.2709E+00	NA
11	4	3.6158E+03	3.1200E+00	NA

11	5	1.5702E+05	3.2240E+00	NA
11	6	3.1853E+04	3.0580E+00	NA
11	7	1.6826E+03	3.2270E+00	NA
11	8	4.6509E+02	3.2670E+00	NA
11	9	2.2666E+03	3.2700E+00	NA
11	10	3.6158E+03	3.1200E+00	NA
11	11	3.1275E+05	3.2250E+00	NA
11	12	6.1227E+04	3.0610E+00	NA
12	1	2.0214E+03	3.2270E+00	NA
12	2	4.1589E+02	3.2700E+00	NA
12	3	2.0184E+03	3.2700E+00	NA
12	4	3.6158E+03	3.1200E+00	NA
12	5	3.1275E+05	3.2250E+00	NA
12	6	6.1227E+04	3.0610E+00	NA
12	7	2.0214E+03	3.2270E+00	NA
12	8	4.1589E+02	3.2700E+00	NA
12	9	2.0184E+03	3.2700E+00	NA
12	10	3.6158E+03	3.1200E+00	NA
12	11	3.5029E+05	3.2250E+00	NA
12	12	6.8157E+04	3.0620E+00	NA
13	1	2.2004E+03	3.2270E+00	NA
13	2	4.0139E+02	3.2710E+00	NA
13	3	1.9127E+03	3.2700E+00	NA
13	4	3.6158E+03	3.1200E+00	NA
13	5	3.5029E+05	3.2250E+00	NA
13	6	6.8157E+04	3.0620E+00	NA
13	7	2.2004E+03	3.2270E+00	NA
13	8	4.0139E+02	3.2710E+00	NA
13	9	1.9127E+03	3.2700E+00	NA
13	10	3.6158E+03	3.1200E+00	NA
13	11	3.7977E+05	3.2250E+00	NA
13	12	7.3609E+04	3.0620E+00	NA
14	1	1.5887E+03	3.0620E+00	NA
14	2	2.2216E+03	3.0070E+00	NA
14	3	2.7480E+03	3.2700E+00	NA
14	4	2.0757E+05	3.2700E+00	NA
14	5	4.5899E+04	3.0650E+00	NA
14	6	9.8220E+04	3.2700E+00	NA
14	7	2.2854E+03	3.0610E+00	NA
14	8	1.2107E+03	3.0070E+00	NA
14	9	2.7480E+03	3.2700E+00	NA
14	10	1.3921E+05	3.2700E+00	NA
14	11	1.2019E+05	3.2700E+00	NA
14	12	8.3610E+04	3.2700E+00	NA
15	1	2.2192E+03	3.0060E+00	NA
15	2	2.7250E+03	3.2700E+00	NA
15	3	8.9291E+02	3.2720E+00	NA
15	4	3.7608E+04	3.2700E+00	NA
15	5	5.1714E+04	3.2700E+00	NA
15	6	1.2668E+05	3.0630E+00	NA
15	7	2.2192E+03	3.0060E+00	NA
15	8	2.7250E+03	3.2700E+00	NA
15	9	8.9291E+02	3.2720E+00	NA
15	10	3.7608E+04	3.2700E+00	NA
15	11	9.4401E+03	3.0150E+00	NA
15	12	3.6220E+04	3.2700E+00	NA
16	1	3.2429E+02	3.2790E+00	NA
16	2	7.7789E+02	3.2720E+00	NA
16	3	1.7632E+03	3.2700E+00	NA
16	4	3.7608E+04	3.2700E+00	NA
16	5	3.6220E+04	3.2700E+00	NA
16	6	9.4401E+03	3.0150E+00	NA
16	7	7.3619E+02	3.2750E+00	NA
16	8	4.5284E+02	3.2670E+00	NA
16	9	1.7632E+03	3.2700E+00	NA
16	10	1.9903E+04	3.1180E+00	NA

16	11	8.9608E+04	3.2700E+00	NA
16	12	1.7333E+04	3.3100E+00	NA
17	1	4.2981E+03	3.0060E+00	NA
17	2	2.7717E+02	3.2790E+00	NA
17	3	1.2754E+03	3.2230E+00	NA
17	4	8.9117E+04	3.2700E+00	NA
17	5	9.0506E+04	3.2700E+00	NA
17	6	2.1465E+04	3.2240E+00	NA
17	7	4.2981E+03	3.0060E+00	NA
17	8	2.7717E+02	3.2790E+00	NA
17	9	1.2754E+03	3.2230E+00	NA
17	10	8.9117E+04	3.2700E+00	NA
17	11	1.1620E+05	3.2700E+00	NA
17	12	2.1858E+04	3.2270E+00	NA
18	1	4.2964E+03	3.0060E+00	NA
18	2	2.3474E+02	3.2790E+00	NA
18	3	1.2076E+03	3.1190E+00	NA
18	4	8.9117E+04	3.2700E+00	NA
18	5	1.1620E+05	3.2700E+00	NA
18	6	2.1858E+04	3.2270E+00	NA
18	7	4.2964E+03	3.0060E+00	NA
18	8	2.3474E+02	3.2790E+00	NA
18	9	1.2076E+03	3.1190E+00	NA
18	10	8.9117E+04	3.2700E+00	NA
18	11	1.2272E+05	3.2700E+00	NA
18	12	2.2147E+04	3.2290E+00	NA
19	1	4.2934E+03	3.0060E+00	NA
19	2	1.7240E+02	3.2790E+00	NA
19	3	1.1825E+03	3.1190E+00	NA
19	4	8.9117E+04	3.2700E+00	NA
19	5	1.2272E+05	3.2700E+00	NA
19	6	2.2147E+04	3.2290E+00	NA
19	7	4.2934E+03	3.0060E+00	NA
19	8	1.7240E+02	3.2790E+00	NA
19	9	1.1825E+03	3.1190E+00	NA
19	10	8.9117E+04	3.2700E+00	NA
19	11	1.3362E+05	3.2240E+00	NA
19	12	2.1491E+04	3.2290E+00	NA
20	1	4.2895E+03	3.0060E+00	NA
20	2	1.4777E+02	3.1760E+00	NA
20	3	1.3795E+03	3.2700E+00	NA
20	4	8.9117E+04	3.2700E+00	NA
20	5	1.3362E+05	3.2240E+00	NA
20	6	2.1491E+04	3.2290E+00	NA
20	7	4.2895E+03	3.0060E+00	NA
20	8	1.4777E+02	3.1760E+00	NA
20	9	1.3795E+03	3.2700E+00	NA
20	10	8.9117E+04	3.2700E+00	NA
20	11	1.3920E+05	3.2230E+00	NA
20	12	1.9422E+04	3.2290E+00	NA
21	1	4.2850E+03	3.0060E+00	NA
21	2	2.1755E+02	3.1190E+00	NA
21	3	2.1814E+03	3.2700E+00	NA
21	4	8.9117E+04	3.2700E+00	NA
21	5	1.3920E+05	3.2230E+00	NA
21	6	1.9422E+04	3.2290E+00	NA
21	7	4.2850E+03	3.0060E+00	NA
21	8	2.1755E+02	3.1190E+00	NA
21	9	2.1814E+03	3.2700E+00	NA
21	10	8.9117E+04	3.2700E+00	NA
21	11	1.8213E+05	3.0080E+00	NA
21	12	1.1155E+04	3.3540E+00	NA
22	1	4.2812E+03	3.0060E+00	NA
22	2	2.5515E+02	3.2290E+00	NA
22	3	2.4494E+03	3.2700E+00	NA
22	4	8.9117E+04	3.2700E+00	NA

22	5	1.8213E+05	3.0080E+00	NA
22	6	1.1155E+04	3.3540E+00	NA
22	7	4.2812E+03	3.0060E+00	NA
22	8	2.5515E+02	3.2290E+00	NA
22	9	2.4494E+03	3.2700E+00	NA
22	10	8.9117E+04	3.2700E+00	NA
22	11	1.9864E+05	3.0070E+00	NA
22	12	8.1137E+03	3.3540E+00	NA
23	1	4.5401E+03	3.2690E+00	NA
23	2	3.5511E+02	3.3050E+00	NA
23	3	5.7593E+03	3.0060E+00	NA
23	4	1.0472E+04	3.3540E+00	NA
23	5	4.9726E+05	3.2230E+00	NA
23	6	2.8721E+04	3.3050E+00	NA
23	7	4.5401E+03	3.2690E+00	NA
23	8	3.5511E+02	3.3050E+00	NA
23	9	5.7593E+03	3.0060E+00	NA
23	10	1.0472E+04	3.3540E+00	NA
23	11	5.8693E+05	3.0080E+00	NA
23	12	2.2684E+04	3.3050E+00	NA
24	1	4.6678E+03	3.2690E+00	NA
24	2	3.7777E+02	3.3050E+00	NA
24	3	5.7574E+03	3.0060E+00	NA
24	4	1.0472E+04	3.3540E+00	NA
24	5	5.8693E+05	3.0080E+00	NA
24	6	2.2684E+04	3.3050E+00	NA
24	7	4.6678E+03	3.2690E+00	NA
24	8	3.7777E+02	3.3050E+00	NA
24	9	5.7574E+03	3.0060E+00	NA
24	10	1.0472E+04	3.3540E+00	NA
24	11	6.8473E+05	3.0070E+00	NA
24	12	1.6239E+04	3.3050E+00	NA
25	1	6.8640E+03	3.0590E+00	NA
25	2	2.6820E+04	3.0060E+00	NA
25	3	4.2527E+02	3.3050E+00	NA
25	4	1.0472E+04	3.3540E+00	NA
25	5	1.6239E+04	3.3050E+00	NA
25	6	6.8473E+05	3.0070E+00	NA
25	7	1.6069E+04	3.0050E+00	NA
25	8	2.1913E+04	3.0080E+00	NA
25	9	4.2527E+02	3.3050E+00	NA
25	10	7.8553E+03	3.2610E+00	NA
25	11	5.0745E+03	3.1770E+00	NA
25	12	6.5087E+04	3.5420E+00	NA
26	1	2.6770E+04	3.0060E+00	NA
26	2	2.2020E+02	3.4540E+00	NA
26	3	2.4350E+03	3.3310E+00	NA
26	4	4.3468E+03	3.2610E+00	NA
26	5	4.3145E+05	3.0100E+00	NA
26	6	9.4742E+03	3.2740E+00	NA
26	7	2.6770E+04	3.0060E+00	NA
26	8	2.2020E+02	3.4540E+00	NA
26	9	2.4350E+03	3.3310E+00	NA
26	10	4.3468E+03	3.2610E+00	NA
26	11	3.7172E+05	3.0110E+00	NA
26	12	1.5756E+04	3.2770E+00	NA
27	1	2.6727E+04	3.0050E+00	NA
27	2	1.6620E+02	3.3550E+00	NA
27	3	2.0684E+03	3.3320E+00	NA
27	4	4.3468E+03	3.2610E+00	NA
27	5	3.7172E+05	3.0110E+00	NA
27	6	1.5756E+04	3.2770E+00	NA
27	7	2.6727E+04	3.0050E+00	NA
27	8	1.6620E+02	3.3550E+00	NA
27	9	2.0684E+03	3.3320E+00	NA
27	10	4.3468E+03	3.2610E+00	NA

27	11	4.3470E+05	3.1190E+00	NA
27	12	1.9900E+04	3.2780E+00	NA
28	1	2.6691E+04	3.0050E+00	NA
28	2	8.3176E+01	3.[illegible]50E+00	NA
28	3	1.4526E+03	3.3340E+00	NA
28	4	4.3468E+03	3.2610E+00	NA
28	5	4.3470E+05	3.1190E+00	NA
28	6	1.9900E+04	3.2780E+00	NA
28	7	2.6691E+04	3.0050E+00	NA
28	8	8.3176E+01	3.3560E+00	NA
28	9	1.4526E+03	3.3340E+00	NA
28	10	4.3468E+03	3.2610E+00	NA
28	11	4.7080E+05	3.1200E+00	NA
28	12	2.1633E+04	3.4540E+00	NA
29	1	2.6651E+04	3.0050E+00	NA
29	2	1.0047E+02	3.3050E+00	NA
29	3	1.2862E+03	3.0120E+00	NA
29	4	4.3468E+03	3.2610E+00	NA
29	5	4.7080E+05	3.1200E+00	NA
29	6	2.1633E+04	3.4540E+00	NA
29	7	2.6651E+04	3.0050E+00	NA
29	8	1.0047E+02	3.3050E+00	NA
29	9	1.2862E+03	3.0120E+00	NA
29	10	4.3468E+03	3.2610E+00	NA
29	11	4.5781E+05	3.1210E+00	NA
29	12	2.0000E+04	3.4540E+00	NA
30	1	2.6615E+04	3.0040E+00	NA
30	2	1.8809E+02	3.3040E+00	NA
30	3	2.1825E+03	3.0550E+00	NA
30	4	4.3468E+03	3.2610E+00	NA
30	5	4.5781E+05	3.1210E+00	NA
30	6	2.0000E+04	3.4540E+00	NA
30	7	2.6615E+04	3.0040E+00	NA
30	8	1.8809E+02	3.3040E+00	NA
30	9	2.1825E+03	3.0550E+00	NA
30	10	4.3468E+03	3.2610E+00	NA
30	11	4.0222E+05	3.1230E+00	NA
30	12	1.3687E+04	3.3550E+00	NA
31	1	2.6581E+04	3.0040E+00	NA
31	2	2.5260E+02	3.3040E+00	NA
31	3	2.9121E+03	3.0560E+00	NA
31	4	4.3468E+03	3.2610E+00	NA
31	5	4.0222E+05	3.1230E+00	NA
31	6	1.3687E+04	3.3550E+00	NA
31	7	2.6581E+04	3.0040E+00	NA
31	8	2.5260E+02	3.3040E+00	NA
31	9	2.9121E+03	3.0560E+00	NA
31	10	4.3468E+03	3.2610E+00	NA
31	11	3.5454E+05	3.1240E+00	NA
31	12	8.7598E+03	3.3560E+00	NA
32	1	2.6544E+04	3.0040E+00	NA
32	2	2.9973E+02	3.3040E+00	NA
32	3	3.4544E+03	3.0560E+00	NA
32	4	4.3468E+03	3.2610E+00	NA
32	5	3.5454E+05	3.1240E+00	NA
32	6	8.7598E+03	3.3560E+00	NA
32	7	2.6544E+04	3.0040E+00	NA
32	8	2.9973E+02	3.3040E+00	NA
32	9	3.4544E+03	3.0560E+00	NA
32	10	4.3468E+03	3.2610E+00	NA
32	11	3.2129E+05	3.1700E+00	NA
32	12	1.0036E+04	3.3050E+00	NA
33	1	2.6513E+04	3.0030E+00	NA
33	2	3.2646E+02	3.3040E+00	NA
33	3	3.7632E+03	3.0560E+00	NA
33	4	4.3468E+03	3.2610E+00	NA

33	5	3.2129E+05	3.1700E+00	NA
33	6	1.0036E+04	3.3050E+00	NA
33	7	2.6513E+04	3.0030E+00	NA
33	8	3.2646E+02	3.3040E+00	NA
33	9	3.7632E+03	3.0560E+00	NA
33	10	4.3468E+03	3.2610E+00	NA
33	11	3.0755E+05	3.1670E+00	NA
33	12	2.4698E+04	3.3040E+00	NA
34	1	2.6473E+04	3.0030E+00	NA
34	2	1.9366E+02	3.3050E+00	NA
34	3	5.3260E+03	3.1690E+00	NA
34	4	4.3468E+03	3.2610E+00	NA
34	5	3.0755E+05	3.1670E+00	NA
34	6	2.4698E+04	3.3040E+00	NA
34	7	2.6473E+04	3.0030E+00	NA
34	8	1.9366E+02	3.3050E+00	NA
34	9	5.3260E+03	3.1690E+00	NA
34	10	4.3468E+03	3.2610E+00	NA
34	11	2.7184E+05	3.1240E+00	NA
34	12	9.0961E+03	3.4550E+00	NA
35	1	2.6406E+04	3.0020E+00	NA
35	2	1.9029E+02	3.3040E+00	NA
35	3	3.8576E+03	3.1690E+00	NA
35	4	4.3468E+03	3.2610E+00	NA
35	5	2.7184E+05	3.1240E+00	NA
35	6	9.0961E+03	3.4550E+00	NA
35	7	2.6406E+04	3.0020E+00	NA
35	8	1.9029E+02	3.3040E+00	NA
35	9	3.8576E+03	3.1690E+00	NA
35	10	4.3468E+03	3.2610E+00	NA
35	11	5.7973E+05	3.1700E+00	NA
35	12	1.2178E+04	3.3050E+00	NA
36	1	2.6363E+04	3.0020E+00	NA
36	2	1.3574E+02	3.3040E+00	NA
36	3	1.8985E+03	3.1680E+00	NA
36	4	4.3468E+03	3.2610E+00	NA
36	5	5.7973E+05	3.1700E+00	NA
36	6	1.2178E+04	3.3050E+00	NA
36	7	2.6363E+04	3.0020E+00	NA
36	8	1.3574E+02	3.3040E+00	NA
36	9	1.8985E+03	3.1680E+00	NA
36	10	4.3468E+03	3.2610E+00	NA
36	11	6.7045E+05	3.1690E+00	NA
36	12	1.8742E+04	3.3050E+00	NA
37	1	1.2625E+03	3.2240E+00	NA
37	2	7.5953E+01	3.3050E+00	NA
37	3	2.8829E+03	3.1270E+00	NA
37	4	5.5182E-11	3.6680E+00	NA
37	5	2.1265E+05	3.1270E+00	NA
37	6	5.2764E+03	3.3050E+00	NA
37	7	1.2625E+03	3.2240E+00	NA
37	8	7.5953E+01	3.3050E+00	NA
37	9	2.8829E+03	3.1270E+00	NA
37	10	5.5182E-11	3.6680E+00	NA
37	11	6.8505E+04	3.1270E+00	NA
37	12	1.4788E+03	3.3050E+00	NA
38	1	5.1762E+02	3.2240E+00	NA
38	2	3.0856E+01	3.3050E+00	NA
38	3	1.4258E+03	3.1270E+00	NA
38	4	5.7823E-11	3.5860E+00	NA
38	5	6.8505E+04	3.1270E+00	NA
38	6	1.4788E+03	3.3050E+00	NA
38	7	5.1762E+02	3.2240E+00	NA
38	8	3.0856E+01	3.3050E+00	NA
38	9	1.4258E+03	3.1270E+00	NA
38	10	5.7823E-11	3.5860E+00	NA

38	11	2.9187E+03	3.1270E+00	NA
38	12	5.9377E+01	3.3050E+00	NA
39	1	6.6982E+01	3.2240E+00	NA
39	2	4.9481E+00	3.3050E+00	NA
39	3	2.4323E+02	3.1270E+00	NA
39	4	1.7086E-10	3.8770E+00	NA
39	5	2.9187E+03	3.1270E+00	NA
39	6	5.9377E+01	3.3050E+00	NA
39	7	6.6982E+01	3.2240E+00	NA
39	8	4.9481E+00	3.3050E+00	NA
39	9	2.4323E+02	3.1270E+00	NA
39	10	1.7086E-10	3.8770E+00	NA
39	11	1.2825E-08	3.1760E+00	NA
39	12	2.6463E-10	3.8530E+00	NA
40	1	2.6306E+04	3.0010E+00	NA
40	2	2.3994E+01	3.3630E+00	NA
40	3	3.2495E+03	3.1270E+00	NA
40	4	4.3468E+03	3.2610E+00	NA
40	5	4.7238E+05	3.1710E+00	NA
40	6	1.3465E+04	3.3050E+00	NA
40	7	2.6306E+04	3.0010E+00	NA
40	8	2.3994E+01	3.3630E+00	NA
40	9	3.2495E+03	3.1270E+00	NA
40	10	4.3468E+03	3.2610E+00	NA
40	11	2.9370E+05	3.1720E+00	NA
40	12	1.2424E+04	3.3040E+00	NA
41	1	2.6275E+04	3.0010E+00	NA
41	2	7.2259E+01	3.3040E+00	NA
41	3	4.1907E+03	3.1700E+00	NA
41	4	4.3468E+03	3.2610E+00	NA
41	5	2.9370E+05	3.1720E+00	NA
41	6	1.2424E+04	3.3040E+00	NA
41	7	2.6275E+04	3.0010E+00	NA
41	8	7.2259E+01	3.3040E+00	NA
41	9	4.1907E+03	3.1700E+00	NA
41	10	4.3468E+03	3.2610E+00	NA
41	11	2.5505E+05	3.0050E+00	NA
41	12	8.0882E+03	3.3040E+00	NA
42	1	2.6239E+04	3.0010E+00	NA
42	2	1.0457E+02	3.3040E+00	NA
42	3	4.7014E+03	3.1700E+00	NA
42	4	4.3468E+03	3.2610E+00	NA
42	5	2.5505E+05	3.0050E+00	NA
42	6	8.0882E+03	3.3040E+00	NA
42	7	2.6239E+04	3.0010E+00	NA
42	8	1.0457E+02	3.3040E+00	NA
42	9	4.7014E+03	3.1700E+00	NA
42	10	4.3468E+03	3.2610E+00	NA
42	11	2.9262E+05	3.4920E+00	NA
42	12	3.0777E+03	3.3050E+00	NA
43	1	2.6211E+04	3.0000E+00	NA
43	2	1.1218E+02	3.3040E+00	NA
43	3	4.7870E+03	3.1700E+00	NA
43	4	4.3468E+03	3.2610E+00	NA
43	5	2.9262E+05	3.4920E+00	NA
43	6	3.0777E+03	3.3050E+00	NA
43	7	2.6211E+04	3.0000E+00	NA
43	8	1.1218E+02	3.3040E+00	NA
43	9	4.7870E+03	3.1700E+00	NA
43	10	4.3468E+03	3.2610E+00	NA
43	11	3.2190E+05	3.4920E+00	NA
43	12	2.9232E+03	3.5240E+00	NA
44	1	5.9123E+03	3.4510E+00	NA
44	2	1.4953E+04	3.0030E+00	NA
44	3	8.4045E+01	3.3530E+00	NA
44	4	4.3468E+03	3.2610E+00	NA

44	5	2.9232E+03	3.5240E+00	NA
44	6	3.2190E+05	3.4920E+00	NA
44	7	1.0750E+04	3.0030E+00	NA
44	8	1.0412E+04	3.0010E+00	NA
44	9	8.4045E+01	3.3530E+00	NA
44	10	3.3796E+03	3.2640E+00	NA
44	11	2.9154E+03	3.5510E+00	NA
44	12	2.0943E+05	3.2130E+00	NA
45	1	1.4886E+04	3.0020E+00	NA
45	2	8.3667E+01	3.3540E+00	NA
45	3	5.4926E+03	3.4070E+00	NA
45	4	2.5493E+03	3.9480E+00	NA
45	5	2.2771E+05	3.0010E+00	NA
45	6	4.6085E+03	3.5810E+00	NA
45	7	1.4886E+04	3.0020E+00	NA
45	8	8.3667E+01	3.3540E+00	NA
45	9	5.4926E+03	3.4070E+00	NA
45	10	2.5493E+03	3.9480E+00	NA
45	11	4.3456E+05	3.4940E+00	NA
45	12	6.2166E+03	3.5770E+00	NA
46	1	1.4841E+04	3.0010E+00	NA
46	2	7.3160E+01	3.3550E+00	NA
46	3	4.6118E+03	3.4070E+00	NA
46	4	2.5493E+03	3.9480E+00	NA
46	5	4.3456E+05	3.4940E+00	NA
46	6	6.2166E+03	3.5770E+00	NA
46	7	1.4841E+04	3.0010E+00	NA
46	8	7.3160E+01	3.3550E+00	NA
46	9	4.6118E+03	3.4070E+00	NA
46	10	2.5493E+03	3.9480E+00	NA
46	11	5.2735E+05	3.4500E+00	NA
46	12	7.2386E+03	3.5260E+00	NA
47	1	1.4772E+04	2.9980E+00	NA
47	2	4.2854E+01	3.3590E+00	NA
47	3	2.4113E+03	3.4100E+00	NA
47	4	3.0840E+03	3.3020E+00	NA
47	5	5.4518E+05	3.4940E+00	NA
47	6	7.2386E+03	3.5260E+00	NA
47	7	1.4772E+04	2.9980E+00	NA
47	8	4.2854E+01	3.3590E+00	NA
47	9	2.4113E+03	3.4100E+00	NA
47	10	3.0840E+03	3.3020E+00	NA
47	11	5.8301E+05	3.4500E+00	NA
47	12	7.9366E+03	3.5260E+00	NA
48	1	1.5825E+03	3.4520E+00	NA
48	2	3.1050E+01	3.9620E+00	NA
48	3	9.2569E+02	3.0110E+00	NA
48	4	6.5645E-11	3.9490E+00	NA
48	5	3.3325E+04	3.0110E+00	NA
48	6	1.1178E+03	3.9620E+00	NA
48	7	1.5825E+03	3.4520E+00	NA
48	8	3.1050E+01	3.9620E+00	NA
48	9	9.2569E+02	3.0110E+00	NA
48	10	6.5645E-11	3.9490E+00	NA
48	11	1.1149E-08	2.8890E+00	NA
48	12	5.8354E-10	3.4560E+00	NA
49	1	1.4746E+04	2.9980E+00	NA
49	2	3.4518E+01	3.5810E+00	NA
49	3	1.1699E+03	3.2080E+00	NA
49	4	3.0840E+03	3.3020E+00	NA
49	5	5.8301E+05	3.4500E+00	NA
49	6	7.9366E+03	3.5260E+00	NA
49	7	1.4746E+04	2.9980E+00	NA
49	8	3.4518E+01	3.5810E+00	NA
49	9	1.1699E+03	3.2080E+00	NA
49	10	3.0840E+03	3.3020E+00	NA

49	11	5.8568E+05	3.4480E+00	NA
49	12	9.3793E+03	3.4610E+00	NA
50	1	1.4711E+04	2.9970E+00	NA
50	2	3.3266E+01	3.5780E+00	NA
50	3	2.3118E+03	3.4540E+00	NA
50	4	3.0840E+03	3.3020E+00	NA
50	5	5.8568E+05	3.4480E+00	NA
50	6	9.3793E+03	3.4610E+00	NA
50	7	1.4711E+04	2.9970E+00	NA
50	8	3.3266E+01	3.5780E+00	NA
50	9	2.3118E+03	3.4540E+00	NA
50	10	3.0840E+03	3.3020E+00	NA
50	11	4.5538E+05	3.4080E+00	NA
50	12	8.2906E+03	3.3580E+00	NA
51	1	1.4685E+04	2.9970E+00	NA
51	2	4.1958E+01	3.4600E+00	NA
51	3	3.4423E+03	3.4530E+00	NA
51	4	3.0840E+03	3.3020E+00	NA
51	5	4.5538E+05	3.4080E+00	NA
51	6	8.2906E+03	3.3580E+00	NA
51	7	1.4685E+04	2.9970E+00	NA
51	8	4.1958E+01	3.4600E+00	NA
51	9	3.4423E+03	3.4530E+00	NA
51	10	3.0840E+03	3.3020E+00	NA
51	11	3.7731E+05	3.4430E+00	NA
51	12	7.2171E+03	3.3580E+00	NA
52	1	1.4656E+04	2.9960E+00	NA
52	2	7.7509E+01	3.3570E+00	NA
52	3	5.0866E+03	3.4050E+00	NA
52	4	3.3218E+03	3.3030E+00	NA
52	5	3.7616E+05	3.4430E+00	NA
52	6	7.2171E+03	3.3580E+00	NA
52	7	1.4656E+04	2.9960E+00	NA
52	8	7.7509E+01	3.3570E+00	NA
52	9	5.0866E+03	3.4050E+00	NA
52	10	3.3218E+03	3.3030E+00	NA
52	11	2.6235E+05	3.4410E+00	NA
52	12	5.1273E+03	3.3580E+00	NA
53	1	1.2216E+03	3.4080E+00	NA
53	2	3.0430E+01	3.8980E+00	NA
53	3	1.0370E+03	3.1080E+00	NA
53	4	5.7567E-11	3.4570E+00	NA
53	5	3.7333E+04	3.1080E+00	NA
53	6	1.0955E+03	3.8980E+00	NA
53	7	1.2216E+03	3.4080E+00	NA
53	8	3.0430E+01	3.8980E+00	NA
53	9	1.0370E+03	3.1080E+00	NA
53	10	5.7567E-11	3.4570E+00	NA
53	11	7.6069E-09	2.9630E+00	NA
53	12	4.3137E-10	3.3580E+00	NA
54	1	1.4642E+04	2.9960E+00	NA
54	2	9.3445E+01	3.3580E+00	NA
54	3	5.8767E+03	3.4060E+00	NA
54	4	3.3218E+03	3.3030E+00	NA
54	5	2.6235E+05	3.4410E+00	NA
54	6	5.1273E+03	3.3580E+00	NA
54	7	1.4642E+04	2.9960E+00	NA
54	8	9.3445E+01	3.3580E+00	NA
54	9	5.8767E+03	3.4060E+00	NA
54	10	3.3218E+03	3.3030E+00	NA
54	11	2.5368E+05	3.4560E+00	NA
54	12	1.7743E+03	3.5230E+00	NA
55	1	2.7535E+03	3.1390E+00	NA
55	2	8.4179E+03	3.0030E+00	NA
55	3	1.0701E+02	3.7450E+00	NA
55	4	3.3218E+03	3.3030E+00	NA

55	5	1.7743E+03	3.5230E+00	NA
55	6	2.5368E+05	3.4560E+00	NA
55	7	6.5631E+03	3.0070E+00	NA
55	8	5.5209E+03	3.0000E+00	NA
55	9	1.0701E+02	3.7450E+00	NA
55	10	3.7863E+03	3.4670E+00	NA
55	11	2.6397E+03	3.8690E+00	NA
55	12	2.4428E+05	3.4500E+00	NA
56	1	8.3587E+03	3.0020E+00	NA
56	2	9.3861E+01	3.8450E+00	NA
56	3	2.5093E+03	3.1390E+00	NA
56	4	4.6084E+03	3.7440E+00	NA
56	5	3.0073E+05	3.4430E+00	NA
56	6	4.9171E+03	3.8980E+00	NA
56	7	8.3587E+03	3.0020E+00	NA
56	8	9.3861E+01	3.8450E+00	NA
56	9	2.5093E+03	3.1390E+00	NA
56	10	4.6084E+03	3.7440E+00	NA
56	11	3.2791E+05	3.4420E+00	NA
56	12	7.4500E+03	3.8970E+00	NA
57	1	8.3194E+03	3.0020E+00	NA
57	2	7.7990E+01	3.8450E+00	NA
57	3	2.1554E+03	3.1590E+00	NA
57	4	4.6084E+03	3.7440E+00	NA
57	5	3.2791E+05	3.4420E+00	NA
57	6	7.4500E+03	3.8970E+00	NA
57	7	8.3194E+03	3.0020E+00	NA
57	8	7.7990E+01	3.8450E+00	NA
57	9	2.1554E+03	3.1590E+00	NA
57	10	4.6084E+03	3.7440E+00	NA
57	11	3.4206E+05	3.4410E+00	NA
57	12	9.2707E+03	3.8690E+00	NA
58	1	8.2829E+03	3.0010E+00	NA
58	2	2.3425E+01	3.9180E+00	NA
58	3	9.7323E+02	3.4070E+00	NA
58	4	3.3412E+03	3.7430E+00	NA
58	5	3.2563E+05	3.4420E+00	NA
58	6	9.2707E+03	3.8690E+00	NA
58	7	8.2829E+03	3.0010E+00	NA
58	8	2.3425E+01	3.9180E+00	NA
58	9	9.7323E+02	3.4070E+00	NA
58	10	3.3412E+03	3.7430E+00	NA
58	11	3.0868E+05	3.4410E+00	NA
58	12	9.5923E+03	3.8690E+00	NA
59	1	9.0009E+02	3.1800E+00	NA
59	2	3.9344E+01	3.7950E+00	NA
59	3	4.7394E+02	3.4390E+00	NA
59	4	2.3826E-11	3.7960E+00	NA
59	5	1.7062E+04	3.4390E+00	NA
59	6	1.4164E+03	3.7950E+00	NA
59	7	9.0009E+02	3.1800E+00	NA
59	8	3.9344E+01	3.7950E+00	NA
59	9	4.7394E+02	3.4390E+00	NA
59	10	2.3826E-11	3.7960E+00	NA
59	11	5.5348E-09	3.6470E+00	NA
59	12	1.9195E-10	3.7910E+00	NA
60	1	8.2726E+03	3.0000E+00	NA
60	2	1.7418E+01	3.3040E+00	NA
60	3	1.2525E+03	3.4110E+00	NA
60	4	3.3412E+03	3.7430E+00	NA
60	5	3.0868E+05	3.4410E+00	NA
60	6	9.5923E+03	3.8690E+00	NA
60	7	8.2726E+03	3.0000E+00	NA
60	8	1.7418E+01	3.3040E+00	NA
60	9	1.2525E+03	3.4110E+00	NA
60	10	3.3412E+03	3.7430E+00	NA

60	11	2.5937E+05	3.4410E+00	NA
60	12	9.2082E+03	3.7950E+00	NA
61	1	8.2625E+03	3.0000E+00	NA
61	2	3.3451E+01	3.8680E+00	NA
61	3	1.7593E+03	3.1790E+00	NA
61	4	3.3412E+03	3.7430E+00	NA
61	5	2.5937E+05	3.4410E+00	NA
61	6	9.2082E+03	3.7950E+00	NA
61	7	8.2625E+03	3.0000E+00	NA
61	8	3.3451E+01	3.8680E+00	NA
61	9	1.7593E+03	3.1790E+00	NA
61	10	3.3412E+03	3.7430E+00	NA
61	11	2.1369E+05	3.4410E+00	NA
61	12	8.4556E+03	3.7950E+00	NA
62	1	8.2351E+03	3.0000E+00	NA
62	2	9.7720E+01	3.8700E+00	NA
62	3	2.9851E+03	3.1790E+00	NA
62	4	2.5251E+03	3.4630E+00	NA
62	5	1.8435E+05	3.4420E+00	NA
62	6	8.4556E+03	3.7950E+00	NA
62	7	8.2351E+03	3.0000E+00	NA
62	8	9.7720E+01	3.8700E+00	NA
62	9	2.9851E+03	3.1790E+00	NA
62	10	2.5251E+03	3.4630E+00	NA
62	11	1.1105E+05	3.4420E+00	NA
62	12	5.8365E+03	3.7950E+00	NA
63	1	7.4050E+02	3.1580E+00	NA
63	2	4.7864E+01	3.7950E+00	NA
63	3	8.4006E+02	3.1770E+00	NA
63	4	2.2247E-11	3.7680E+00	NA
63	5	3.0242E+04	3.1770E+00	NA
63	6	1.7231E+03	3.7950E+00	NA
63	7	7.4050E+02	3.1580E+00	NA
63	8	4.7864E+01	3.7950E+00	NA
63	9	8.4006E+02	3.1770E+00	NA
63	10	2.2247E-11	3.7680E+00	NA
63	11	5.5889E-09	3.4050E+00	NA
63	12	2.8195E-10	3.5200E+00	NA
64	1	8.2271E+03	3.0000E+00	NA
64	2	1.1150E+02	3.8700E+00	NA
64	3	3.2608E+03	3.1790E+00	NA
64	4	2.5251E+03	3.4630E+00	NA
64	5	1.1105E+05	3.4420E+00	NA
64	6	5.8365E+03	3.7950E+00	NA
64	7	8.2271E+03	3.0000E+00	NA
64	8	1.1150E+02	3.8700E+00	NA
64	9	3.2608E+03	3.1790E+00	NA
64	10	2.5251E+03	3.4630E+00	NA
64	11	5.1665E+04	3.0570E+00	NA
64	12	3.4953E+03	3.7950E+00	NA
65	1	7.0647E+02	3.4390E+00	NA
65	2	3.4971E+03	3.1790E+00	NA
65	3	1.2738E+02	3.7950E+00	NA
65	4	2.5251E+03	3.4630E+00	NA
65	5	3.4953E+03	3.7950E+00	NA
65	6	5.1665E+04	3.0570E+00	NA
65	7	2.8840E+03	3.1780E+00	NA
65	8	2.0868E+03	3.1790E+00	NA
65	9	1.2738E+02	3.7950E+00	NA
65	10	2.1826E+03	3.5200E+00	NA
65	11	1.7293E+03	3.5190E+00	NA
65	12	6.2452E+04	3.1800E+00	NA
66	1	6.0680E+04	3.0060E+00	NA
66	2	1.3694E+01	3.3010E+00	NA
66	3	3.3002E+02	3.0450E+00	NA
66	4	1.4963E+03	3.7440E+00	NA

66	5	8.5941E+04	3.1800E+00	NA
66	6	5.7654E+03	3.8970E+00	NA
66	7	6.0680E+04	3.0060E+00	NA
66	8	1.3694E+01	3.3010E+00	NA
66	9	3.3002E+02	3.0450E+00	NA
66	10	1.4963E+03	3.7440E+00	NA
66	11	6.8310E+04	3.1800E+00	NA
66	12	4.9581E+03	3.7960E+00	NA
67	1	6.0689E+04	3.0060E+00	NA
67	2	1.9929E+01	3.8980E+00	NA
67	3	3.0875E+02	3.0440E+00	NA
67	4	1.4963E+03	3.7440E+00	NA
67	5	6.8310E+04	3.1800E+00	NA
67	6	4.9581E+03	3.7960E+00	NA
67	7	6.0689E+04	3.0060E+00	NA
67	8	1.9929E+01	3.8980E+00	NA
67	9	3.0875E+02	3.0440E+00	NA
67	10	1.4963E+03	3.7440E+00	NA
67	11	6.2424E+04	3.1800E+00	NA
67	12	4.5120E+03	3.7960E+00	NA
68	1	6.0692E+04	3.0060E+00	NA
68	2	2.6745E+01	3.8970E+00	NA
68	3	3.8541E+02	3.4890E+00	NA
68	4	1.4963E+03	3.7440E+00	NA
68	5	6.2424E+04	3.1800E+00	NA
68	6	4.5120E+03	3.7960E+00	NA
68	7	6.0692E+04	3.0060E+00	NA
68	8	2.6745E+01	3.8970E+00	NA
68	9	3.8541E+02	3.4890E+00	NA
68	10	1.4963E+03	3.7440E+00	NA
68	11	3.8276E+04	3.1780E+00	NA
68	12	2.1924E+03	3.7960E+00	NA
69	1	6.0686E+04	3.0060E+00	NA
69	2	3.8821E+01	3.7960E+00	NA
69	3	6.3725E+02	3.4880E+00	NA
69	4	1.4963E+03	3.7440E+00	NA
69	5	3.8276E+04	3.1780E+00	NA
69	6	2.1924E+03	3.7960E+00	NA
69	7	6.0686E+04	3.0060E+00	NA
69	8	3.8821E+01	3.7960E+00	NA
69	9	6.3725E+02	3.4880E+00	NA
69	10	1.4963E+03	3.7440E+00	NA
69	11	5.4205E+04	3.4910E+00	NA
69	12	1.2263E+03	3.8970E+00	NA
70	1	6.0679E+04	3.0060E+00	NA
70	2	4.3694E+01	3.7960E+00	NA
70	3	7.7291E+02	3.0350E+00	NA
70	4	1.4963E+03	3.7440E+00	NA
70	5	5.4205E+04	3.4910E+00	NA
70	6	1.2263E+03	3.8970E+00	NA
70	7	6.0679E+04	3.0060E+00	NA
70	8	4.3694E+01	3.7960E+00	NA
70	9	7.7291E+02	3.0350E+00	NA
70	10	1.4963E+03	3.7440E+00	NA
70	11	1.1646E+05	3.4880E+00	NA
70	12	5.0688E+03	3.7960E+00	NA

BENCHMARK PROBLEM 3

MODAL SUPERPOSITION TIME HISTORY ANALYSIS

SYSTEM 80+ PRESSURIZER SURGE LINE - MODAL SUPERPOSITION TIME HISTORY RUN

C O N T R O L I N F O R M A T I O N

```
NUMBER OF NODAL POINTS                  =    45
NUMBER OF ELEMENT TYPES                 =     3
NUMBER OF STATIC LOAD CASES             =     0
NUMBER OF DYNAMIC LOAD CASES            =     1
NUMBER OF ANCHOR MVMT CASES             =     0
NUMBER OF FREQUENCIES                   =    30
SOLUTION MODE (MODEX)                   =     0
  EQ.0,  EXECUTION
  EQ.1,  DATA CHECK
STRESS CALCULATION FLAG                 =     0
   EQ.0 NO
   EQ.1 YES
ASME CODE EVALUATION FLAG               =     0
   EQ.1  CLASS 1 PIPING
   EQ.2  CLASS2 OR CLASS 3 PIPING
ACCELERATION DUE TO GRAVITY            =386.4
BANDWIDTH MINIMIZATION FLAG             =     0
   EQ.0  NO
   EQ.1  YES
ARBITRARY NODE NUMBERING FLAG           =     1
   EQ.0  NO
   EQ.1  YES
NUMBER OF SUPPORT GROUPS                =     2
FLAG FOR MODAL COORD. INPUT UNITS       =     0
   EQ.0  CONSISTENT UNIT
   EQ.1  FEET TO INCHES
```

LIST OF ANALYSIS TO BE PERFORMED

LOAD CASE	DISK FILE	ANALYSIS TYPE
1	0	MODAL SUPERPOSITION TIME HISTORY RUN

NODAL POINT INPUT DATA

NEW NODE	OLD NODE	BOUNDARY CONDITION CODES X	Y	Z	XX	YY	ZZ
1	1	0	0	0	0	0	0
2	101	0	0	0	0	0	0
3	2	0	0	0	0	0	0
4	3	0	0	0	0	0	0
5	4	0	0	0	0	0	0
6	401	0	0	0	0	0	0
7	5	0	0	0	0	0	0
8	6	0	0	0	0	0	0
9	7	0	0	0	0	0	0
10	701	0	0	0	0	0	0
11	702	0	0	0	0	0	0
12	703	0	0	0	0	0	0
13	8	0	0	0	0	0	0
14	9	0	0	0	0	0	0
15	10	0	0	0	0	0	0
16	11	0	0	0	0	0	0
17	12	0	0	0	0	0	0
18	13	0	0	0	0	0	0
19	14	0	0	0	0	0	0
20	141	0	0	0	0	0	0
21	142	0	0	0	0	0	0
22	143	0	0	0	0	0	0
23	15	0	0	0	0	0	0
24	16	0	0	0	0	0	0
25	17	0	0	0	0	0	0
26	18	0	0	0	0	0	0
27	19	0	0	0	0	0	0
28	191	0	0	0	0	0	0
29	20	0	0	0	0	0	0
30	21	0	0	0	0	0	0
31	22	0	0	0	0	0	0
32	221	0	0	0	0	0	0
33	23	0	0	0	0	0	0
34	231	0	0	0	0	0	0
35	24	0	0	0	0	0	0
36	25	0	0	0	0	0	0
37	251	0	0	0	0	0	0
38	26	0	0	0	0	0	0
39	27	0	0	0	0	0	0
40	271	0	0	0	0	0	0
41	28	0	0	0	0	0	0
42	29	0	0	0	0	0	0
43	291	0	0	0	0	0	0
44	30	0	0	0	0	0	0
45	31	0	0	0	0	0	0

NODAL POINT COORDINATES

X	Y	Z	T
-317.690	1334.375	367.965	653.000
-317.690	1358.066	367.965	653.000
-317.690	1381.757	367.965	653.000
-317.690	1405.449	367.965	653.000
-317.690	1423.448	385.871	653.000
-317.690	1423.615	417.903	653.000
-317.690	1423.782	449.934	653.000
-317.690	1423.949	481.966	653.000
-299.691	1424.137	499.965	653.000
-266.159	1424.311	499.965	653.000
-232.628	1424.486	499.965	653.000
-199.096	1424.661	499.965	653.000
-165.565	1424.836	499.965	653.000
-132.034	1425.010	499.965	653.000
-98.502	1425.185	499.965	653.000
-64.971	1425.360	499.965	653.000
-31.439	1425.534	499.965	653.000
-13.440	1425.722	481.966	653.000
-13.440	1425.628	474.965	653.000
-13.440	1425.823	440.590	653.000
-13.440	1426.019	406.215	653.000
-13.440	1426.214	371.840	653.000
-13.440	1426.409	337.465	653.000
-13.440	1426.604	303.090	653.000
-13.440	1426.800	268.715	653.000
-13.440	1426.995	234.340	653.000
-13.440	1427.190	199.965	653.000
-13.440	1427.363	166.909	653.000
-13.440	1427.536	133.852	653.000
-13.440	1427.709	100.796	653.000
-18.712	1427.787	88.068	653.000
-39.411	1427.940	67.369	653.000
-60.110	1428.093	46.670	653.000
-77.081	1428.218	29.699	653.000
-94.053	1428.344	12.727	653.000
-94.053	1428.531	-12.727	653.000
-80.085	1428.633	-26.695	653.000
-66.117	1428.735	-40.663	653.000
-40.663	1428.921	-40.663	653.000
-26.662	1429.023	-26.662	653.000
-12.662	1429.126	-12.662	653.000
.000	1447.125	.000	653.000
.000	1473.747	.000	653.000
.000	1500.368	.000	653.000
.000	1526.990	.000	653.000

S P R I N G E L E M E N T S

ELEMENT TYPE = 1
NUMBER OF ELEMENTS = 14

ELEMENT LOAD CASE MULTIPLIERS

CASE(A)	CASE(B)	CASE(C)	CASE(D)
1.0000	1.0000	1.0000	1.0000

ELEMENT NUMBER	NODE (N)	SUPPORT GROUP	CODE KD	CODE KR	DIRECTION COSINES WRT GLOBAL AXES X-	Y-	Z-	SPECIFIED DISPLACEMENT	SPECIFIED ROTATION	SPRING RATE
1	1	1	1	0	1.000	.000	.000	.000	.000	1.0000E+13
2	1	1	1	0	.000	1.000	.000	.000	.000	1.0000E+13
3	1	1	1	0	.000	.000	1.000	.000	.000	1.0000E+13
4	1	1	0	1	1.000	.000	.000	.000	.000	1.0000E+15
5	1	1	0	1	.000	1.000	.000	.000	.000	1.0000E+15
6	1	1	0	1	.000	.000	1.000	.000	.000	1.0000E+15
7	19	2	1	0	1.000	.000	.000	.000	.000	5.0000E+05
8	23	2	1	0	.000	.000	1.000	.000	.000	5.0000E+05
9	31	2	1	0	1.000	.000	.000	.000	.000	1.0000E+13
10	31	2	1	0	.000	1.000	.000	.000	.000	1.0000E+13
11	31	2	1	0	.000	.000	1.000	.000	.000	1.0000E+13
12	31	2	0	1	1.000	.000	.000	.000	.000	1.0000E+15
13	31	2	0	1	.000	1.000	.000	.000	.000	1.0000E+15
14	31	2	0	1	.000	.000	1.000	.000	.000	1.0000E+15

S N U B B E R E L E M E N T S

ELEMENT TYPE = 4
NUMBER OF ELEMENTS = 1

ELEMENT LOAD CASE MULTIPLIERS

CASE(A)	CASE(B)	CASE(C)	CASE(D)
1.0000	1.0000	1.0000	1.0000

ELEMENT NUMBER	NODE (N)	SUPPORT GROUP	CODE KD	CODE KR	DIRECTION COSINES WRT GLOBAL AXES X-	Y-	Z-	SPECIFIED DISPLACEMENT	SPECIFIED ROTATION	SPRING RATE
1	7	2	1	0	.000	.000	1.000	.000	.000	2.0000E+05

P I P E E L E M E N T I N P U T D A T A

C O N T R O L I N F O R M A T I O N

NUMBER OF PIPE ELEMENTS	=	44
NUMBER OF MATERIAL SETS	=	1
MAXIMUM NUMBER OF MATERIAL TEMPERATURE INPUT POINTS	=	9
NUMBER OF SECTION PROPERTY SETS	=	1
NUMBER OF BRANCH POINT NODES	=	0
MAXIMUM NUMBER OF TANGENTS COMMON TO A BRANCH POINT	=	3
FLAG FOR NEGLECTING AXIAL DEFORMATIONS IN BEND ELEMENTS (EQ.1, NEGLECT)	=	0

MATERIAL PROPERTY TABLES

MATERIAL NUMBER = (1)
NUMBER OF
TEMPERATURE POINTS = (9)
IDENTIFICATION = (SA358 TYPE 316 STAINLESS STEEL PIPE)

POINT NUMBER	TEMPERATURE	YOUNG'S MODULUS	POISSON'S RATIO	THERMAL EXPANSION
1	70.00	2.830E+07	.300	8.420E-06
2	100.00	2.820E+07	.300	8.590E-06
3	200.00	2.770E+07	.300	9.090E-06
4	300.00	2.710E+07	.300	9.560E-06
5	400.00	2.660E+07	.300	9.950E-06
6	500.00	2.610E+07	.300	1.030E-05
7	600.00	2.540E+07	.300	1.050E-05
8	650.00	2.510E+07	.300	1.060E-05
9	700.00	2.480E+07	.300	1.080E-05

SECTION PROPERTY TABLE

SECTION NUMBER	OUTSIDE DIAMETER	WALL THICKNESS	SHAPE FACTOR FOR SHEAR	WEIGHT/ UNIT LENGTH	MASS/ UNIT LENGTH	DESCRIPTION
1	12.750	1.3120	.0000	1.9200E+01	4.9689E-02	12 INCH SCH 160

ELEMENT LOAD CASE MULTIPLIERS

	CASE A	CASE B	CASE C	CASE D
X-DIRECTION GRAVITY	.000	.000	.000	.000
Y-DIRECTION GRAVITY	-1.000	.000	.000	.000
Z-DIRECTION GRAVITY	.000	.000	.000	.000
THERMAL DISTORTION	.000	.000	1.000	.000
PRESSURE DISTORTION	.000	1.000	.000	.000

P I P E E L E M E N T I N P U T D A T A

ELEMENT NUMBER	ELEMENT TYPE	NODE -I	NODE -J	MATL. NUMBER	SECTION NUMBER	REFERENCE TEMPERATURE (BEND RADIUS)	DESIGN PRESSURE (THIRD POINT)	PEAK PRESSURE (X3-ORDINATE)	TEST PRESSURE (Y3-ORDINATE)	END END-I (Z3-	CODES END-J ORDINATE)	NODE INCREMENT (BEND DEGREE)	INPUT TAG	
1	TANGENT	1	101	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II	
2	TANGENT	101	2	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II	
3	TANGENT	2	3	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II	
4	BEND	3	4	1	1	70.00	2250.00	2250.00	2250.00	0	0			I
						(18.000)	( )	(-317.690)	(1423.355)	(367.965)		(89.7001)		
5	TANGENT	4	401	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II	
6	TANGENT	401	5	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II	
7	TANGENT	5	6	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II	
8	BEND	6	7	1	1	70.00	2250.00	2250.00	2250.00	0	0			I
						(18.000)	( )	(-317.690)	(1424.043)	(499.965)		(89.9977)		
9	TANGENT	7	701	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II	
10	TANGENT	701	702	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II	
11	TANGENT	702	703	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II	
12	TANGENT	703	8	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II	
13	TANGENT	8	9	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II	
14	TANGENT	9	10	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II	
15	TANGENT	10	11	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II	
16	TANGENT	11	12	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II	
17	BEND	12	13	1	1	70.00	2250.00	2250.00	2250.00	0	0			I
						(18.000)	( )	(-13.440)	(1425.628)	(499.965)		(89.9977)		
18	TANGENT	13	14	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II	
19	TANGENT	14	141	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II	
20	TANGENT	141	142	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II	
21	TANGENT	142	143	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II	
22	TANGENT	143	15	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II	
23	TANGENT	15	16	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II	
24	TANGENT	16	17	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II	
25	TANGENT	17	18	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II	
26	TANGENT	18	19	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II	
27	TANGENT	19	191	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II	
28	TANGENT	191	20	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II	
29	TANGENT	20	21	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II	
30	BEND	21	22	1	1	70.00	2250.00	2250.00	2250.00	0	0			I
						(18.000)	( )	(-13.440)	(1427.748)	(93.340)		(45.0014)		
31	TANGENT	22	221	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II	
32	TANGENT	221	23	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II	
33	TANGENT	23	231	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II	
34	TANGENT	231	24	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II	
35	BEND	24	25	1	1	70.00	2250.00	2250.00	2250.00	0	0			I
						(18.000)	( )	(-106.780)	(1428.438)	(.000)		(89.9967)		
36	TANGENT	25	251	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II	
37	TANGENT	251	26	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II	
38	BEND	26	27	1	1	70.00	2250.00	2250.00	2250.00	0	0			I
						(18.000)	( )	(-53.390)	(1428.828)	(-53.390)		(89.9967)		

P I P E E L E M E N T I N P U T D A T A

ELEMENT NUMBER	ELEMENT TYPE	NODE -I	NODE -J	MATL. NUMBER	SECTION NUMBER	REFERENCE TEMPERATURE (BEND RADIUS)	DESIGN PRESSURE (THIRD POINT)	PEAK PRESSURE (X3-ORDINATE)	TEST PRESSURE (Y3-ORDINATE)	END END-I (Z3-ORDINATE)	CODES END-J	NODE INCREMENT (BEND DEGREE)	INPUT TAG
39	TANGENT	27	271	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II
40	TANGENT	271	28	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II
41	BEND	28	29	1	1	70.00	2250.00	2250.00	2250.00	0	0		
						(18.000)	( )	(.000)	(1429.218)	(	.000)	(89.7033)	
42	TANGENT	29	291	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II
43	TANGENT	291	30	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II
44	TANGENT	30	31	1	1	70.00	2250.00	2250.00	2250.00	0	0	1	II

I

N O D A L L O A D S (S T A T I C) O R M A S S E S (D Y N A M I C)

NODE NUMBER	LOAD CASE	X-AXIS FORCE	Y-AXIS FORCE	Z-AXIS FORCE	X-AXIS MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT

D Y N A M I C A N A L Y S I S

STRUCTURE
LOAD CASE

1 MODAL SUP. TIME HISTORY ANALYSIS

ELEMENT LOAD MULTIPLIERS			
A	B	C	D
.000	.000	.000	.000

PRINT OF FREQUENCIES

MODE NUMBER	CIRCULAR FREQUENCY (RAD/SEC)	FREQUENCY (CYCLES/SEC)	PERIOD (SEC)
1	8.2618E+00	1.3149E+00	7.6052E-01
2	2.7093E+01	4.3120E+00	2.3191E-01
3	2.9944E+01	4.7658E+00	2.0983E-01
4	4.3168E+01	6.8704E+00	1.4555E-01
5	5.4406E+01	8.6590E+00	1.1549E-01
6	7.9458E+01	1.2646E+01	7.9076E-02
7	8.7464E+01	1.3920E+01	7.1837E-02
8	9.2658E+01	1.4747E+01	6.7811E-02
9	1.0098E+02	1.6072E+01	6.2222E-02
10	1.2779E+02	2.0338E+01	4.9169E-02
11	1.2999E+02	2.0689E+01	4.8335E-02
12	1.4094E+02	2.2431E+01	4.4580E-02
13	1.5888E+02	2.5286E+01	3.9547E-02
14	1.8474E+02	2.9402E+01	3.4011E-02
15	2.0993E+02	3.3411E+01	2.9930E-02

16	2.1821E+02	3.4729E+01	2.8795E-02
17	2.6913E+02	4.2834E+01	2.3346E-02
18	2.7654E+02	4.4013E+01	2.2721E-02
19	3.2874E+02	5.2321E+01	1.9113E-02
20	3.3603E+02	5.3481E+01	1.8698E-02
21	3.5468E+02	5.6449E+01	1.7715E-02
22	4.0643E+02	6.4686E+01	1.5459E-02
23	4.3682E+02	6.9521E+01	1.4384E-02
24	5.2406E+02	8.3406E+01	1.1990E-02
25	5.6313E+02	8.9625E+01	1.1158E-02
26	6.0389E+02	9.6112E+01	1.0404E-02
27	6.2127E+02	9.8878E+01	1.0114E-02

MODAL PARTICIPATION FACTORS

MODE	FREQ(CPS)	X-DIRECTION	Y-DIRECTION	Z-DIRECTION
1	1.315	-3.1342E-01	5.5930E+00	3.6742E-02
2	4.312	-3.4443E+00	-8.3543E-01	1.3840E-01
3	4.766	3.7270E+00	-2.2035E-01	-2.6006E-01
4	6.870	-1.8266E+00	3.7298E+00	-1.2499E+00
5	8.659	-2.0107E+00	-1.0364E+00	-8.7982E-01
6	12.646	-1.1180E+00	-9.1453E-01	-4.5747E+00
7	13.920	1.6181E+00	2.6979E-01	-3.5310E+00
8	14.747	1.8491E+00	5.8283E-02	-5.9134E-01
9	16.072	-2.3210E+00	-9.8060E-01	1.3006E-01
10	20.338	1.2198E+00	-3.8252E-01	2.6970E-01
11	20.689	-2.1071E+00	-5.8416E-01	1.1530E+00
12	22.431	-5.0618E-01	2.1847E-01	-2.3183E+00
13	25.286	-4.5807E-01	4.4204E-01	-2.1787E+00
14	29.402	1.2442E+00	-3.0068E-01	-2.5390E+00
15	33.411	9.1065E-01	1.5253E-01	1.7502E+00
16	34.729	4.3527E-01	-2.3957E-01	-2.9287E-01
17	42.834	7.3281E-01	9.0884E-01	1.0715E+00
18	44.013	-1.4236E+00	9.3622E-02	-2.0125E-01
19	52.321	-8.6640E-01	-2.0477E-01	-1.2027E-01
20	53.481	3.4172E-01	-6.5147E-01	-4.7860E-01
21	56.449	5.3581E-03	-2.3499E-02	7.9029E-02
22	64.686	6.8516E-02	-2.2147E-01	-1.0776E-01
23	69.521	-7.4928E-01	1.8389E-02	-2.5036E-01
24	83.406	1.0429E-02	9.2250E-01	4.3951E-01
25	89.625	4.5329E-01	2.9511E-03	-1.5864E-01
26	96.112	2.6318E-02	-3.9703E-02	2.0847E-02
27	98.878	1.5594E-02	2.8390E-03	2.5659E-01

F O R C E D R E S P O N S E A N A L Y S I S

SUPPORT GROUP NUMBER = 1

CONTROL INFORMATION

NUMBER OF TIME FUNCTIONS = 3
GROUND MOTION INDICATOR = 1
EQ.0, NONE
EQ.1, GROUND INPUT
NUMBER OF ARRIVAL TIMES = 1
NUMBER OF TIME STEPS = 9980
OUTPUT PRINT INTERVAL = 10
TIME STEP = .00010
DAMPING FACTOR = .02000

GROUND ACCELERATION INPUT

	X-DIRECTION	Y-DIRECTION	Z-DIRECTION
TIME FUNCTION NUMBER(S) =	1	2	3
ARRIVAL TIME NUMBER(S) =	1	1	1

ARRIVAL TIME VALUES

ENTRY NUMBER	ARRIVAL TIME VALUE
1	.000000

TIME FUNCTION NUMBER = (1)

FUNCTION DESCRIPTION = (NODE 1 X GROUND ACCELERATION TIME HISTORY - X-DIRECTION

NUMBER OF ABSCISSAE = (1000)
FUNCTION SCALE FACTOR = (.1000E+01)

TIME VALUE	FUNCTION	TIME VALUE	FUNCTION	TIME VALUE	FUNCTION	TIME VALUE	FUNCTION	TIME VALUE	FUNCTION
.00000	3.2640E+00	.00100	4.7150E+00	.00200	6.1670E+00	.00300	6.7120E+00	.00400	3.3110E+00
.00500	-3.6500E-01	.00600	-5.3000E-01	.00700	1.5820E+00	.00800	2.0790E+00	.00900	-2.0100E-01
.01000	-3.2140E+00	.01100	-5.0460E+00	.01200	-5.5220E+00	.01300	-5.1840E+00	.01400	-4.2950E+00
.01500	-3.2690E+00	.01600	-2.8260E+00	.01700	-3.0860E+00	.01800	-3.2890E+00	.01900	-2.6630E+00
.02000	-1.3330E+00	.02100	-1.6000E-01	.02200	1.8300E-01	.02300	-2.5300E-01	.02400	-9.0400E-01
.02500	-1.2250E+00	.02600	-9.8600E-01	.02700	-2.2900E-01	.02800	8.7500E-01	.02900	2.1190E+00
.03000	3.2810E+00	.03100	4.1650E+00	.03200	4.6670E+00	.03300	4.8300E+00	.03400	4.8120E+00
.03500	4.7810E+00	.03600	4.8290E+00	.03700	4.9620E+00	.03800	5.2090E+00	.03900	5.3780E+00
.04000	5.0680E+00	.04100	4.1630E+00	.04200	2.7510E+00	.04300	9.7700E-01	.04400	-9.8600E-01
.04500	-2.9660E+00	.04600	-4.7410E+00	.04700	-6.1240E+00	.04800	-7.0700E+00	.04900	-7.6960E+00
.05000	-8.1860E+00	.05100	-8.7010E+00	.05200	-9.2940E+00	.05300	-9.7650E+00	.05400	-9.7450E+00
.05500	-9.2750E+00	.05600	-8.8260E+00	.05700	-8.7980E+00	.05800	-9.2710E+00	.05900	-9.8840E+00
.06000	-1.0057E+01	.06100	-9.3060E+00	.06200	-7.3670E+00	.06300	-4.2980E+00	.06400	-4.6000E-01
.06500	3.5970E+00	.06600	7.3170E+00	.06700	1.0312E+01	.06800	1.2451E+01	.06900	1.3827E+01
.07000	1.4623E+01	.07100	1.4957E+01	.07200	1.4819E+01	.07300	1.4112E+01	.07400	1.2750E+01
.07500	1.0756E+01	.07600	8.2950E+00	.07700	5.6400E+00	.07800	3.0900E+00	.07900	8.9200E-01
.08000	-7.9700E-01	.08100	-1.8860E+00	.08200	-2.5080E+00	.08300	-3.0270E+00	.08400	-3.7160E+00
.08500	-4.6170E+00	.08600	-5.5160E+00	.08700	-6.0320E+00	.08800	-5.7840E+00	.08900	-4.7090E+00
.09000	-3.2070E+00	.09100	-1.8220E+00	.09200	-9.9200E-01	.09300	-8.4800E-01	.09400	-1.2040E+00
.09500	-1.7180E+00	.09600	-2.0390E+00	.09700	-1.9630E+00	.09800	-1.5060E+00	.09900	-8.7400E-01
.10000	-3.2900E-01	.10100	-2.8000E-02	.10200	7.7000E-02	.10300	2.2100E-01	.10400	7.1000E-01
.10500	1.7530E+00	.10600	3.3550E+00	.10700	5.3040E+00	.10800	7.2570E+00	.10900	8.8680E+00
.11000	9.9030E+00	.11100	1.0300E+01	.11200	1.0158E+01	.11300	9.6710E+00	.11400	9.0380E+00
.11500	8.3870E+00	.11600	7.7320E+00	.11700	6.9770E+00	.11800	5.9690E+00	.11900	4.5640E+00
.12000	2.6980E+00	.12100	4.1600E-01	.12200	-2.1270E+00	.12300	-4.7080E+00	.12400	-7.0960E+00
.12500	-9.1090E+00	.12600	-1.0637E+01	.12700	-1.1644E+01	.12800	-1.2150E+01	.12900	-1.2186E+01
.13000	-1.1773E+01	.13100	-1.0913E+01	.13200	-9.6050E+00	.13300	-7.8830E+00	.13400	-5.8390E+00
.13500	-3.6370E+00	.13600	-1.4800E+00	.13700	4.4400E-01	.13800	2.0070E+00	.13900	3.1650E+00
.14000	3.9490E+00	.14100	4.4270E+00	.14200	4.6680E+00	.14300	4.7170E+00	.14400	4.5880E+00
.14500	4.2750E+00	.14600	3.7700E+00	.14700	3.0870E+00	.14800	2.2660E+00	.14900	1.3760E+00
.15000	4.9900E-01	.15100	-2.8600E-01	.15200	-9.2400E-01	.15300	-1.3840E+00	.15400	-1.6680E+00
.15500	-1.8000E+00	.15600	-1.8180E+00	.15700	-1.7690E+00	.15800	-1.7010E+00	.15900	-1.6590E+00
.16000	-1.6840E+00	.16100	-1.8000E+00	.16200	-2.0210E+00	.16300	-2.3380E+00	.16400	-2.7250E+00
.16500	-3.1390E+00	.16600	-3.5310E+00	.16700	-3.8480E+00	.16800	-4.0440E+00	.16900	-4.0880E+00
.17000	-3.9600E+00	.17100	-3.6600E+00	.17200	-3.1990E+00	.17300	-2.5980E+00	.17400	-1.8870E+00
.17500	-1.0950E+00	.17600	-2.5600E-01	.17700	5.9600E-01	.17800	1.4290E+00	.17900	2.2080E+00
.18000	2.9040E+00	.18100	3.4870E+00	.18200	3.9330E+00	.18300	4.2220E+00	.18400	4.3390E+00
.18500	4.2770E+00	.18600	4.0360E+00	.18700	3.6240E+00	.18800	3.0620E+00	.18900	2.3800E+00
.19000	1.5180E+00	.19100	8.2400E-01	.19200	5.2000E-02	.19300	-6.4500E-01	.19400	-1.2210E+00
.19500	-1.6420E+00	.19600	-1.8880E+00	.19700	-1.9570E+00	.19800	-1.8610E+00	.19900	-1.6220E+00
.20000	-1.2690E+00	.20100	-8.3000E-01	.20200	-3.3500E-01	.20300	1.9200E-01	.20400	7.2700E-01
.20500	1.2490E+00	.20600	1.7390E+00	.20700	2.1750E+00	.20800	2.5420E+00	.20900	2.8230E+00
.21000	3.0090E+00	.21100	3.0950E+00	.21200	3.0830E+00	.21300	2.9790E+00	.21400	2.7950E+00
.21500	2.5460E+00	.21600	2.2480E+00	.21700	1.9190E+00	.21800	1.5760E+00	.21900	1.2360E+00
.22000	9.1000E-01	.22100	5.0700E-01	.22200	3.2800E-01	.22300	7.2000E-02	.22400	-1.7200E-01
.22500	-4.1400E-01	.22600	-6.6800E-01	.22700	-9.4800E-01	.22800	-1.2610E+00	.22900	-1.6110E+00
.23000	-1.9970E+00	.23100	-2.4110E+00	.23200	-2.8270E+00	.23300	-3.2580E+00	.23400	-3.6530E+00
.23500	-3.9970E+00	.23600	-4.2660E+00	.23700	-4.4400E+00	.23800	-4.4970E+00	.23900	-4.4210E+00
.24000	-4.1980E+00	.24100	-3.8210E+00	.24200	-3.2890E+00	.24300	-2.6090E+00	.24400	-1.7950E+00
.24500	-8.7200E-01	.24600	1.2700E-01	.24700	1.1610E+00	.24800	2.1830E+00	.24900	3.1410E+00
.25000	3.9840E+00	.25100	4.6650E+00	.25200	5.1410E+00	.25300	5.3830E+00	.25400	5.3700E+00
.25500	5.1000E+00	.25600	4.5810E+00	.25700	3.8380E+00	.25800	2.9080E+00	.25900	1.8390E+00
.26000	6.8400E-01	.26100	-4.9800E-01	.26200	-1.6490E+00	.26300	-2.7130E+00	.26400	-3.6410E+00
.26500	-4.3970E+00	.26600	-4.9550E+00	.26700	-5.2990E+00	.26800	-5.4200E+00	.26900	-5.3120E+00
.27000	-4.9720E+00	.27100	-4.4110E+00	.27200	-3.6660E+00	.27300	-2.7910E+00	.27400	-1.8480E+00
.27500	-8.8600E-01	.27600	6.5000E-02	.27700	9.8700E-01	.27800	1.8670E+00	.27900	2.6870E+00
.28000	3.4210E+00	.28100	4.0420E+00	.28200	4.5300E+00	.28300	4.8860E+00	.28400	5.1180E+00

.28500	5.2460E+00	.28600	5.2890E+00	.28700	5.2660E+00	.28800	5.1850E+00	.28900	5.0470E+00
.29000	4.8510E+00	.29100	4.5950E+00	.29200	4.2770E+00	.29300	3.8970E+00	.29400	3.4580E+00
.29500	2.9570E+00	.29600	2.3910E+00	.29700	1.7530E+00	.29800	1.0380E+00	.29900	2.4700E-01
.30000	-6.1600E-01	.30100	-1.5350E+00	.30200	-2.4910E+00	.30300	-3.4590E+00	.30400	-4.4090E+00
.30500	-5.3060E+00	.30600	-6.1140E+00	.30700	-6.7880E+00	.30800	-7.2900E+00	.30900	-7.5810E+00
.31000	-7.6300E+00	.31100	-7.4160E+00	.31200	-6.9300E+00	.31300	-6.1750E+00	.31400	-5.1660E+00
.31500	-3.9300E+00	.31600	-2.5090E+00	.31700	-9.5700E-01	.31800	6.5900E-01	.31900	2.2670E+00
.32000	3.7940E+00	.32100	5.1870E+00	.32200	6.4040E+00	.32300	7.4060E+00	.32400	8.1410E+00
.32500	8.5540E+00	.32600	8.6020E+00	.32700	8.2760E+00	.32800	7.6050E+00	.32900	6.6470E+00
.33000	5.4700E+00	.33100	4.1330E+00	.33200	2.6830E+00	.33300	1.1620E+00	.33400	-3.8600E-01
.33500	-1.9050E+00	.33600	-3.3390E+00	.33700	-4.6340E+00	.33800	-5.7420E+00	.33900	-6.6310E+00
.34000	-7.2880E+00	.34100	-7.7160E+00	.34200	-7.9300E+00	.34300	-7.9510E+00	.34400	-7.7970E+00
.34500	-7.4870E+00	.34600	-7.0380E+00	.34700	-6.4700E+00	.34800	-5.8090E+00	.34900	-5.0810E+00
.35000	-4.3110E+00	.35100	-3.5180E+00	.35200	-2.7180E+00	.35300	-1.9180E+00	.35400	-1.1260E+00
.35500	-3.4400E-01	.35600	4.2500E-01	.35700	1.1710E+00	.35800	1.8890E+00	.35900	2.5770E+00
.36000	3.2290E+00	.36100	3.8390E+00	.36200	4.3950E+00	.36300	4.8840E+00	.36400	5.2880E+00
.36500	5.5900E+00	.36600	5.7750E+00	.36700	5.8310E+00	.36800	5.7500E+00	.36900	5.5240E+00
.37000	5.1540E+00	.37100	4.6430E+00	.37200	4.0040E+00	.37300	3.2510E+00	.37400	2.4030E+00
.37500	1.4870E+00	.37600	5.3600E-01	.37700	-4.1600E-01	.37800	-1.3310E+00	.37900	-2.1710E+00
.38000	-2.9020E+00	.38100	-3.4980E+00	.38200	-3.9310E+00	.38300	-4.1830E+00	.38400	-4.2430E+00
.38500	-4.1090E+00	.38600	-3.7830E+00	.38700	-3.2810E+00	.38800	-2.6250E+00	.38900	-1.8420E+00
.39000	-9.6800E-01	.39100	-3.9000E-02	.39200	9.0500E-01	.39300	1.8280E+00	.39400	2.6920E+00
.39500	3.4660E+00	.39600	4.1240E+00	.39700	4.6450E+00	.39800	5.0160E+00	.39900	5.2280E+00
.40000	5.2830E+00	.40100	5.1830E+00	.40200	4.9390E+00	.40300	4.5620E+00	.40400	4.0700E+00
.40500	3.4790E+00	.40600	2.8090E+00	.40700	2.0810E+00	.40800	1.3150E+00	.40900	5.3000E-01
.41000	-2.5500E-01	.41100	-1.0220E+00	.41200	-1.7570E+00	.41300	-2.4430E+00	.41400	-3.0700E+00
.41500	-3.6250E+00	.41600	-4.0990E+00	.41700	-4.4800E+00	.41800	-4.7610E+00	.41900	-4.9330E+00
.42000	-4.9910E+00	.42100	-4.9310E+00	.42200	-4.7510E+00	.42300	-4.4540E+00	.42400	-4.0450E+00
.42500	-3.5320E+00	.42600	-2.9280E+00	.42700	-2.2500E+00	.42800	-1.5180E+00	.42900	-7.5200E-01
.43000	2.4000E-02	.43100	7.8300E-01	.43200	1.5000E+00	.43300	2.1520E+00	.43400	2.7140E+00
.43500	3.1660E+00	.43600	3.4920E+00	.43700	3.6760E+00	.43800	3.7130E+00	.43900	3.6020E+00
.44000	3.3460E+00	.44100	2.9550E+00	.44200	2.4450E+00	.44300	1.8340E+00	.44400	1.1430E+00
.44500	3.9600E-01	.44600	-3.8000E-01	.44700	-1.1570E+00	.44800	-1.9080E+00	.44900	-2.6080E+00
.45000	-3.2330E+00	.45100	-3.7630E+00	.45200	-4.1800E+00	.45300	-4.4720E+00	.45400	-4.6320E+00
.45500	-4.6590E+00	.45600	-4.5540E+00	.45700	-4.3240E+00	.45800	-3.9770E+00	.45900	-3.5260E+00
.46000	-2.9850E+00	.46100	-2.3700E+00	.46200	-1.6970E+00	.46300	-9.8500E-01	.46400	-2.5600E-01
.46500	1.7500E-01	.46600	1.1900E+00	.46700	1.8780E+00	.46800	2.5330E+00	.46900	3.1440E+00
.47000	3.6990E+00	.47100	4.1780E+00	.47200	4.5610E+00	.47300	4.8360E+00	.47400	5.0020E+00
.47500	5.0590E+00	.47600	5.0130E+00	.47700	4.8630E+00	.47800	4.6020E+00	.47900	4.2260E+00
.48000	3.7340E+00	.48100	3.1320E+00	.48200	2.4320E+00	.48300	1.6540E+00	.48400	8.2100E-01
.48500	-4.3000E-02	.48600	-9.1300E-01	.48700	-1.7660E+00	.48800	-2.5770E+00	.48900	-3.3190E+00
.49000	-3.9660E+00	.49100	-4.4920E+00	.49200	-4.8700E+00	.49300	-5.0840E+00	.49400	-5.1200E+00
.49500	-4.9750E+00	.49600	-4.6510E+00	.49700	-4.1560E+00	.49800	-3.5050E+00	.49900	-2.7170E+00
.50000	-1.8160E+00	.50100	-8.3600E-01	.50200	1.9600E-01	.50300	1.2410E+00	.50400	2.2640E+00
.50500	3.2290E+00	.50600	4.1060E+00	.50700	4.8650E+00	.50800	5.4730E+00	.50900	5.9050E+00
.51000	6.1410E+00	.51100	6.1730E+00	.51200	6.0140E+00	.51300	5.6940E+00	.51400	5.2390E+00
.51500	4.6620E+00	.51600	3.9610E+00	.51700	3.1360E+00	.51800	2.2040E+00	.51900	1.2040E+00
.52000	1.9100E-01	.52100	-7.8400E-01	.52200	-1.6860E+00	.52300	-2.5040E+00	.52400	-3.2370E+00
.52500	-3.8870E+00	.52600	-4.4510E+00	.52700	-4.9150E+00	.52800	-5.2640E+00	.52900	-5.4830E+00
.53000	-5.5670E+00	.53100	-5.5210E+00	.53200	-5.3560E+00	.53300	-5.0880E+00	.53400	-4.7280E+00
.53500	-4.2890E+00	.53600	-3.7730E+00	.53700	-3.1850E+00	.53800	-2.5290E+00	.53900	-1.8190E+00
.54000	-1.0710E+00	.54100	-3.0400E-01	.54200	4.6200E-01	.54300	1.2100E+00	.54400	1.9250E+00
.54500	2.5930E+00	.54600	3.1970E+00	.54700	3.7220E+00	.54800	4.1530E+00	.54900	4.4770E+00
.55000	4.6870E+00	.55100	4.7780E+00	.55200	4.7470E+00	.55300	4.5970E+00	.55400	4.3300E+00
.55500	3.9490E+00	.55600	3.4630E+00	.55700	2.8840E+00	.55800	2.2280E+00	.55900	1.5170E+00
.56000	7.7200E-01	.56100	1.8000E-02	.56200	-7.2000E-01	.56300	-1.4210E+00	.56400	-2.0650E+00
.56500	-2.6350E+00	.56600	-3.1130E+00	.56700	-3.4880E+00	.56800	-3.7460E+00	.56900	-3.8790E+00
.57000	-3.8840E+00	.57100	-3.7630E+00	.57200	-3.5190E+00	.57300	-3.1630E+00	.57400	-2.7070E+00
.57500	-2.1670E+00	.57600	-1.5620E+00	.57700	-9.1300E-01	.57800	-2.3900E-01	.57900	4.3500E-01
.58000	1.0890E+00	.58100	1.7030E+00	.58200	2.2560E+00	.58300	2.7330E+00	.58400	3.1230E+00
.58500	3.4140E+00	.58600	3.6000E+00	.58700	3.6800E+00	.58800	3.6540E+00	.58900	3.5270E+00
.59000	3.3050E+00	.59100	2.9970E+00	.59200	2.6160E+00	.59300	2.1750E+00	.59400	1.6860E+00
.59500	1.1640E+00	.59600	6.2300E-01	.59700	7.7000E-02	.59800	-4.6200E-01	.59900	-9.7900E-01
.60000	-1.4620E+00	.60100	-1.9010E+00	.60200	-2.2870E+00	.60300	-2.6110E+00	.60400	-2.8680E+00
.60500	-3.0540E+00	.60600	-3.1680E+00	.60700	-3.2080E+00	.60800	-3.1750E+00	.60900	-3.0730E+00
.61000	-2.9060E+00	.61100	-2.6780E+00	.61200	-2.3960E+00	.61300	-2.0690E+00	.61400	-1.7060E+00

.61500	-1.3160E+00
.62000	6.5400E-01
.62500	1.7650E+00
.63000	1.3390E+00
.63500	-3.4800E-01
.64000	-2.1960E+00
.64500	-2.8930E+00
.65000	-1.8300E+00
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.66000	2.2140E+00
.66500	2.6220E+00
.67000	1.5430E+00
.67500	-1.4800E-01
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.69000	7.8700E-01
.69500	1.9170E+00
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.71000	-8.4300E-01
.71500	-2.0470E+00
.72000	-2.0090E+00
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.73000	7.7300E-01
.73500	1.6450E+00
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.74500	-2.1700E-01
.75000	-1.6860E+00
.75500	-2.1780E+00
.76000	-1.3420E+00
.76500	2.2500E-01
.77000	1.5570E+00
.77500	1.9380E+00
.78000	1.3300E+00
.78500	1.8800E-01
.79000	-8.1200E-01
.79500	-1.1090E+00
.80000	-6.0600E-01
.80500	2.9000E-01
.81000	9.7200E-01
.81500	9.6800E-01
.82000	2.2500E-01
.82500	-8.4000E-01
.83000	-1.5520E+00
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.84500	3.3100E-01
.85000	9.8800E-01
.85500	1.1410E+00
.86000	8.0600E-01
.86500	2.6200E-01
.87000	-2.4700E-01
.87500	-2.1800E-01
.88000	3.5000E-02
.88500	3.5200E-01
.89000	4.6700E-01
.89500	3.4100E-01
.90000	4.9000E-02
.90500	-2.1300E-01
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.91500	-7.0000E-03
.92000	1.3500E-01
.92500	1.0000E-02
.93000	-3.3700E-01
.93500	-6.5200E-01
.94000	-7.6200E-01

.61600	-9.1100E-01
.62100	9.7800E-01
.62600	1.8080E+00
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.63600	-7.4900E-01
.64100	-2.4630E+00
.64600	-2.8190E+00
.65100	-1.4420E+00
.65600	8.0000E-01
.66100	2.4290E+00
.66600	2.5100E+00
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.67600	-3.8900E-01
.68100	-1.1240E+00
.68600	-3.1200E-01
.69100	1.0720E+00
.69600	2.0050E+00
.70100	1.7340E+00
.70600	4.5300E-01
.71100	-1.1450E+00
.71600	-2.1460E+00
.72100	-1.8680E+00
.72600	-4.9200E-01
.73100	1.0280E+00
.73600	1.6660E+00
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.74600	-5.4300E-01
.75100	-1.8880E+00
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.76100	-1.0600E+00
.76600	5.4300E-01
.77100	1.7200E+00
.77600	1.8870E+00
.78100	1.1240E+00
.78600	-4.5000E-02
.79100	-9.3900E-01
.79600	-1.0650E+00
.80100	-4.4000E-01
.80600	4.6300E-01
.81100	1.0350E+00
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.82100	1.7000E-02
.82600	-1.0320E+00
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.83600	-1.3330E+00
.84100	-4.4700E-01
.84600	4.9900E-01
.85100	1.0590E+00
.85600	1.1180E+00
.86100	6.7800E-01
.86600	1.6800E-01
.87100	-2.8700E-01
.87600	-1.8800E-01
.88100	1.1500E-01
.88600	3.8600E-01
.89100	4.6400E-01
.89600	2.9000E-01
.90100	-1.2000E-02
.90600	-2.2900E-01
.91100	-1.6400E-01
.91600	4.8000E-02
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.94100	-7.4500E-01

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.62700	1.7860E+00
.63200	7.6800E-01
.63700	-1.1460E+00
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.64700	-2.6710E+00
.65200	-1.0180E+00
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.66200	2.5790E+00
.66700	2.3430E+00
.67200	8.2400E-01
.67700	-6.0300E-01
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.69200	1.3420E+00
.69700	2.0420E+00
.70200	1.5460E+00
.70700	1.3000E-01
.71200	-1.4260E+00
.71700	-2.1850E+00
.72200	-1.6800E+00
.72700	-1.5000E-01
.73200	1.2500E+00
.73700	1.6280E+00
.74200	7.0800E-01
.74700	-8.6300E-01
.75200	-2.0440E+00
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.76200	-7.5400E-01
.76700	8.4200E-01
.77200	1.8400E+00
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.78700	-2.6700E-01
.79200	-1.0340E+00
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.80200	-2.6200E-01
.80700	6.2200E-01
.81200	1.0670E+00
.81700	7.4500E-01
.82200	-1.9900E-01
.82700	-1.2040E+00
.83200	-1.6160E+00
.83700	-1.1890E+00
.84200	-2.4500E-01
.84700	6.5100E-01
.85200	1.1090E+00
.85700	1.0750E+00
.86200	5.5100E-01
.86700	5.9000E-02
.87200	-2.9200E-01
.87700	-1.5000E-01
.88200	1.9200E-01
.88700	4.1400E-01
.89200	4.4900E-01
.89700	2.3400E-01
.90200	-7.1000E-02
.90700	-2.2700E-01
.91200	-1.4500E-01
.91700	9.3000E-02
.92200	1.0900E-01
.92700	-1.1100E-01
.93200	-4.7700E-01
.93700	-7.3200E-01
.94200	-7.1400E-01

.61800	-9.5000E-02
.62300	1.4870E+00
.62800	1.6990E+00
.63300	4.2200E-01
.63800	-1.5270E+00
.64300	-2.8180E+00
.64800	-2.4530E+00
.65300	-5.6800E-01
.65800	1.6010E+00
.66300	2.6610E+00
.66800	2.1240E+00
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.67800	-7.9700E-01
.68300	-9.6200E-01
.68800	2.1800E-01
.69300	1.5810E+00
.69800	2.0310E+00
.70300	1.3170E+00
.70800	-1.9900E-01
.71300	-1.6760E+00
.71800	-2.1690E+00
.72300	-1.4410E+00
.72800	1.8000E-01
.73300	1.4320E+00
.73800	1.5330E+00
.74300	4.1800E-01
.74800	-1.1650E+00
.75300	-2.1460E+00
.75800	-1.8110E+00
.76300	-4.3200E-01
.76800	1.1150E+00
.77300	1.9160E+00
.77800	1.6710E+00
.78300	6.6800E-01
.78800	-4.7200E-01
.79300	-1.0950E+00
.79800	-8.8500E-01
.80300	-7.8000E-02
.80800	7.6300E-01
.81300	1.0660E+00
.81800	5.9300E-01
.82300	-4.1800E-01
.82800	-1.3500E+00
.83300	-1.5950E+00
.83800	-1.0240E+00
.84300	-4.5000E-02
.84800	7.8400E-01
.85300	1.1380E+00
.85800	1.0100E+00
.86300	4.4000E-01
.86800	-5.9000E-02
.87300	-2.7400E-01
.87800	-1.0100E-01
.88300	2.5700E-01
.88800	4.3900E-01
.89300	4.2200E-01
.89800	1.7300E-01
.90300	-1.2700E-01
.90800	-2.1200E-01
.91300	-1.1200E-01
.91800	1.2200E-01
.92300	8.5000E-02
.92800	-1.8500E-01
.93300	-5.4100E-01
.93800	-7.5500E-01
.94300	-6.6900E-01

.61900	2.9300E-01
.62400	1.6570E+00
.62900	1.5480E+00
.63400	4.6000E-02
.63900	-1.8810E+00
.64400	-2.8920E+00
.64900	-2.1700E+00
.65400	-1.0700E-01
.65900	1.9350E+00
.66400	2.6740E+00
.66900	1.8560E+00
.67400	1.3400E-01
.67900	-9.6300E-01
.68400	-7.8000E-01
.68900	4.9900E-01
.69400	1.7750E+00
.69900	1.9760E+00
.70400	1.0540E+00
.70900	-5.2500E-01
.71400	-1.8870E+00
.71900	-2.1090E+00
.72400	-1.1550E+00
.72900	4.8900E-01
.73400	1.5660E+00
.73900	1.3890E+00
.74400	1.0700E-01
.74900	-1.4420E+00
.75400	-2.1900E+00
.75900	-1.5940E+00
.76400	-1.0200E-01
.76900	1.3550E+00
.77400	1.9490E+00
.77900	1.5140E+00
.78400	4.2800E-01
.78900	-6.5600E-01
.79400	-1.1190E+00
.79900	-7.5600E-01
.80400	1.0800E-01
.80900	8.8000E-01
.81400	1.0330E+00
.81900	4.1800E-01
.82400	-6.3400E-01
.82900	-1.4670E+00
.83400	-1.5400E+00
.83900	-8.4200E-01
.84400	1.4800E-01
.84900	8.9600E-01
.85400	1.1480E+00
.85900	9.2000E-01
.86400	3.4700E-01
.86900	-1.6800E-01
.87400	-2.4700E-01
.87900	-3.9000E-02
.88400	3.1100E-01
.88900	4.5800E-01
.89400	3.8600E-01
.89900	1.1000E-01
.90400	-1.7700E-01
.90900	-1.9300E-01
.91400	-6.3000E-02
.91900	1.3500E-01
.92400	5.3000E-02
.92900	-2.6100E-01
.93400	-6.0000E-01
.93900	-7.6500E-01
.94400	-6.1000E-01

.94500	-5.3800E-01	.94600	-4.5500E-01	.94700	-3.6300E-01	.94800	-2.6700E-01	.94900	-1.6700E-01
.95000	-6.7000E-02	.95100	3.2000E-02	.95200	1.2800E-01	.95300	2.2200E-01	.95400	3.1100E-01
.95500	3.9400E-01	.95600	4.6800E-01	.95700	5.3300E-01	.95800	5.8500E-01	.95900	6.2600E-01
.96000	6.5500E-01	.96100	6.7200E-01	.96200	6.7900E-01	.96300	6.7600E-01	.96400	6.6300E-01
.96500	6.4200E-01	.96600	6.1300E-01	.96700	5.7600E-01	.96800	5.3500E-01	.96900	4.8800E-01
.97000	4.3700E-01	.97100	3.8300E-01	.97200	3.2700E-01	.97300	2.7200E-01	.97400	2.1600E-01
.97500	1.6100E-01	.97600	1.1200E-01	.97700	6.6000E-02	.97800	2.5000E-02	.97900	-8.0000E-03
.98000	-3.4000E-02	.98100	-5.2000E-02	.98200	-6.2000E-02	.98300	-6.4000E-02	.98400	-5.8000E-02
.98500	-4.5000E-02	.98600	-2.8000E-02	.98700	-5.0000E-03	.98800	1.9000E-02	.98900	4.4000E-02
.99000	6.8000E-02	.99100	9.0000E-02	.99200	1.0900E-01	.99300	1.2400E-01	.99400	1.3300E-01
.99500	1.3600E-01	.99600	1.3300E-01	.99700	1.2200E-01	.99800	1.0400E-01	.99900	9.3000E-02

TIME FUNCTION NUMBER = (2)

FUNCTION DESCRIPTION = (NODE 1 Y GROUND ACCELERATION

NUMBER OF ABSCISSAE = (1000)
FUNCTION SCALE FACTOR = (.1000E+01)

TIME VALUE	FUNCTION	TIME VALUE	FUNCTION	TIME VALUE	FUNCTION	TIME VALUE	FUNCTION	TIME VALUE	FUNCTION
.00000	5.8070E+00	.00100	-2.9353E+01	.00200	-6.4514E+01	.00300	-1.5147E+02	.00400	-2.4703E+02
.00500	-3.0223E+02	.00600	-2.8452E+02	.00700	-1.9534E+02	.00800	-6.4352E+01	.00900	6.8204E+01
.01000	1.6838E+02	.01100	2.1780E+02	.01200	2.1472E+02	.01300	1.7015E+02	.01400	1.0345E+02
.01500	3.8863E+01	.01600	9.7800E-01	.01700	7.2100E+00	.01800	5.9740E+01	.01900	1.4202E+02
.02000	2.2393E+02	.02100	2.7419E+02	.02200	2.7359E+02	.02300	2.2193E+02	.02400	1.3593E+02
.02500	4.0885E+01	.02600	-3.8923E+01	.02700	-8.7273E+01	.02800	-9.9349E+01	.02900	-8.1739E+01
.03000	-4.9497E+01	.03100	-2.0965E+01	.03200	-1.1589E+01	.03300	-2.8774E+01	.03400	-6.9778E+01
.03500	-1.2336E+02	.03600	-1.7428E+02	.03700	-2.0874E+02	.03800	-2.1854E+02	.03900	-2.0261E+02
.04000	-1.6611E+02	.04100	-1.1837E+02	.04200	-7.0014E+01	.04300	-3.0323E+01	.04400	-5.1150E+00
.04500	4.6920E+00	.04600	3.1320E+00	.04700	-2.2270E+00	.04800	-2.8520E+00	.04900	7.8790E+00
.05000	3.2474E+01	.05100	6.8549E+01	.05200	1.0961E+02	.05300	1.4702E+02	.05400	1.7253E+02
.05500	1.8106E+02	.05600	1.7233E+02	.05700	1.5064E+02	.05800	1.2304E+02	.05900	9.6679E+01
.06000	7.6318E+01	.06100	6.3194E+01	.06200	5.5394E+01	.06300	4.9193E+01	.06400	4.0604E+01
.06500	2.6600E+01	.06600	5.8300E+00	.06700	-2.1112E+01	.06800	-5.1827E+01	.06900	-8.2631E+01
.07000	-1.0944E+02	.07100	-1.2883E+02	.07200	-1.3896E+02	.07300	-1.4002E+02	.07400	-1.3408E+02
.07500	-1.2432E+02	.07600	-1.1395E+02	.07700	-1.0516E+02	.07800	-9.8433E+01	.07900	-9.2509E+01
.08000	-8.4988E+01	.08100	-7.3362E+01	.08200	-5.5931E+01	.08300	-3.2395E+01	.08400	-4.1300E+00
.08500	2.6100E+01	.08600	5.4788E+01	.08700	7.8597E+01	.08800	9.5293E+01	.08900	1.0455E+02
.09000	1.0814E+02	.09100	1.0912E+02	.09200	1.1045E+02	.09300	1.1363E+02	.09400	1.1798E+02
.09500	1.2105E+02	.09600	1.1980E+02	.09700	1.1200E+02	.09800	9.7138E+01	.09900	7.6416E+01
.10000	5.2183E+01	.10100	2.7010E+01	.10200	2.9500E+00	.10300	-1.8806E+01	.10400	-3.7906E+01
.10500	-5.4562E+01	.10600	-6.9190E+01	.10700	-8.2125E+01	.10800	-9.3500E+01	.10900	-1.0325E+02
.11000	-1.1116E+02	.11100	-1.1691E+02	.11200	-1.2008E+02	.11300	-1.2015E+02	.11400	-1.1657E+02
.11500	-1.0887E+02	.11600	-9.6929E+01	.11700	-8.1042E+01	.11800	-6.2008E+01	.11900	-4.0993E+01
.12000	-1.9313E+01	.12100	1.8150E+00	.12200	2.1491E+01	.12300	3.9228E+01	.12400	5.4924E+01
.12500	6.8762E+01	.12600	8.1023E+01	.12700	9.1869E+01	.12800	1.0119E+02	.12900	1.0859E+02
.13000	1.1239E+02	.13100	1.1484E+02	.13200	1.1236E+02	.13300	1.0570E+02	.13400	9.5133E+01
.13500	8.1347E+01	.13600	6.5325E+01	.13700	4.8086E+01	.13800	3.0468E+01	.13900	1.2991E+01
.14000	-4.1230E+00	.14100	-2.0858E+01	.14200	-3.7203E+01	.14300	-5.2976E+01	.14400	-6.7779E+01
.14500	-8.1018E+01	.14600	-9.2012E+01	.14700	-1.0015E+02	.14800	-1.0502E+02	.14900	-1.0647E+02
.15000	-1.0458E+02	.15100	-9.9692E+01	.15200	-9.2208E+01	.15300	-8.2548E+01	.15400	-7.1047E+01
.15500	-5.7935E+01	.15600	-4.3368E+01	.15700	-2.7506E+01	.15800	-1.0599E+01	.15900	6.9540E+00
.16000	2.4598E+01	.16100	4.1650E+01	.16200	5.7387E+01	.16300	7.1153E+01	.16400	8.2444E+01
.16500	9.0946E+01	.16600	9.6558E+01	.16700	9.9349E+01	.16800	9.9470E+01	.16900	9.7098E+01
.17000	9.2383E+01	.17100	8.5406E+01	.17200	7.6213E+01	.17300	6.4891E+01	.17400	5.1600E+01
.17500	3.6612E+01	.17600	2.0351E+01	.17700	3.3590E+00	.17800	-1.3744E+01	.17900	-3.0323E+01
.18000	-4.5787E+01	.18100	-5.9643E+01	.18200	-7.1515E+01	.18300	-8.1151E+01	.18400	-8.8396E+01
.18500	-9.3166E+01	.18600	-9.5413E+01	.18700	-9.5117E+01	.18800	-9.2268E+01	.18900	-8.6890E+01
.19000	-7.9058E+01	.19100	-6.8926E+01	.19200	-5.6743E+01	.19300	-4.2859E+01	.19400	-2.7721E+01
.19500	-1.1832E+01	.19600	4.2820E+00	.19700	2.0094E+01	.19800	3.5124E+01	.19900	4.8949E+01
.20000	6.1211E+01	.20100	7.1608E+01	.20200	7.9892E+01	.20300	8.5868E+01	.20400	8.9377E+01
.20500	9.0330E+01	.20600	8.8706E+01	.20700	8.4555E+01	.20800	7.8011E+01	.20900	6.9291E+01
.21000	5.8682E+01	.21100	4.6518E+01	.21200	3.3174E+01	.21300	1.9047E+01	.21400	4.5320E+00
.21500	-9.9760E+00	.21600	-2.4084E+01	.21700	-3.7410E+01	.21800	-4.9589E+01	.21900	-6.0282E+01
.22000	-6.9183E+01	.22100	-7.6034E+01	.22200	-8.0641E+01	.22300	-8.2881E+01	.22400	-8.2711E+01
.22500	-8.0163E+01	.22600	-7.5349E+01	.22700	-6.8445E+01	.22800	-5.9678E+01	.22900	-4.9319E+01
.23000	-3.7679E+01	.23100	-2.5083E+01	.23200	-1.1876E+01	.23300	1.5820E+00	.23400	1.4929E+01
.23500	2.7800E+01	.23600	3.9841E+01	.23700	5.0713E+01	.23800	6.0102E+01	.23900	6.7743E+01
.24000	7.3420E+01	.24100	7.6980E+01	.24200	7.8333E+01	.24300	7.7460E+01	.24400	7.4416E+01
.24500	6.9315E+01	.24600	6.2316E+01	.24700	5.3629E+01	.24800	4.3502E+01	.24900	3.2215E+01
.25000	2.0073E+01	.25100	7.3990E+00	.25200	-5.4590E+00	.25300	-1.8146E+01	.25400	-3.0306E+01
.25500	-4.1590E+01	.25600	-5.1666E+01	.25700	-6.0238E+01	.25800	-6.7054E+01	.25900	-7.1918E+01
.26000	-7.4694E+01	.26100	-7.5306E+01	.26200	-7.3747E+01	.26300	-7.0073E+01	.26400	-6.4394E+01
.26500	-5.6886E+01	.26600	-4.7774E+01	.26700	-3.7323E+01	.26800	-2.5839E+01	.26900	-1.3656E+01
.27000	-1.1300E+00	.27100	1.1375E+01	.27200	2.3511E+01	.27300	3.4950E+01	.27400	4.5386E+01
.27500	5.4521E+01	.27600	6.2075E+01	.27700	6.7797E+01	.27800	7.1491E+01	.27900	7.3050E+01
.28000	7.2467E+01	.28100	6.9815E+01	.28200	6.5232E+01	.28300	5.8876E+01	.28400	5.0910E+01

.28500	4.1528E+01	.28600	3.0965E+01	.28700	1.9510E+01	.28800	7.4970E+00	.28900	-4.7090E+00
.29000	-1.6739E+01	.29100	-2.8234E+01	.29200	-3.8864E+01	.29300	-4.8339E+01	.29400	-5.6408E+01
.29500	-6.2866E+01	.29600	-6.7559E+01	.29700	-7.0372E+01	.29800	-7.1239E+01	.29900	-7.0141E+01
.30000	-6.7114E+01	.30100	-6.2249E+01	.30200	-5.5693E+01	.30300	-4.7643E+01	.30400	-3.8338E+01
.30500	-2.8045E+01	.30600	-1.7065E+01	.30700	-5.7120E+00	.30800	5.6960E+00	.30900	1.6840E+01
.31000	2.7417E+01	.31100	3.7154E+01	.31200	4.5801E+01	.31300	5.3134E+01	.31400	5.8969E+01
.31500	6.3152E+01	.31600	6.5566E+01	.31700	6.6148E+01	.31800	6.4890E+01	.31900	6.1833E+01
.32000	5.7065E+01	.32100	5.0726E+01	.32200	4.3004E+01	.32300	3.4125E+01	.32400	2.4360E+01
.32500	1.4013E+01	.32600	3.3940E+00	.32700	-7.2080E+00	.32800	-1.7531E+01	.32900	-2.7350E+01
.33000	-3.6450E+01	.33100	-4.4586E+01	.33200	-5.1491E+01	.33300	-5.6901E+01	.33400	-6.0602E+01
.33500	-6.2474E+01	.33600	-6.2500E+01	.33700	-6.0747E+01	.33800	-5.7330E+01	.33900	-5.2383E+01
.34000	-4.6048E+01	.34100	-3.8481E+01	.34200	-2.9868E+01	.34300	-2.0425E+01	.34400	-1.0410E+01
.34500	-1.0300E-01	.34600	1.0194E+01	.34700	2.0166E+01	.34800	2.9510E+01	.34900	3.7950E+01
.35000	4.5246E+01	.35100	5.1200E+01	.35200	5.5656E+01	.35300	5.8512E+01	.35400	5.9698E+01
.35500	5.9193E+01	.35600	5.7023E+01	.35700	5.3258E+01	.35800	4.8016E+01	.35900	4.1444E+01
.36000	3.3726E+01	.36100	2.5087E+01	.36200	1.5785E+01	.36300	6.0960E+00	.36400	-3.6910E+00
.36500	-1.3284E+01	.36600	-2.2406E+01	.36700	-3.0801E+01	.36800	-3.8242E+01	.36900	-4.4541E+01
.37000	-4.9537E+01	.37100	-5.3098E+01	.37200	-5.5130E+01	.37300	-5.5579E+01	.37400	-5.4438E+01
.37500	-5.1750E+01	.37600	-4.7603E+01	.37700	-4.2134E+01	.37800	-3.5520E+01	.37900	-2.7963E+01
.38000	-1.9689E+01	.38100	-1.0938E+01	.38200	-1.9520E+00	.38300	7.0160E+00	.38400	1.5720E+01
.38500	2.3931E+01	.38600	3.1427E+01	.38700	3.8007E+01	.38800	4.3488E+01	.38900	4.7726E+01
.39000	5.0614E+01	.39100	5.2072E+01	.39200	5.2071E+01	.39300	5.0632E+01	.39400	4.7799E+01
.39500	4.3661E+01	.39600	3.8352E+01	.39700	3.2023E+01	.39800	2.4859E+01	.39900	1.7059E+01
.40000	8.8400E+00	.40100	4.2700E-01	.40200	-7.9450E+00	.40300	-1.6045E+01	.40400	-2.3654E+01
.40500	-3.0560E+01	.40600	-3.6574E+01	.40700	-4.1532E+01	.40800	-4.5301E+01	.40900	-4.7789E+01
.41000	-4.8932E+01	.41100	-4.8703E+01	.41200	-4.7121E+01	.41300	-4.4234E+01	.41400	-4.0125E+01
.41500	-3.4917E+01	.41600	-2.8757E+01	.41700	-2.1821E+01	.41800	-1.4311E+01	.41900	-6.4340E+00
.42000	1.5880E+00	.42100	9.5230E+00	.42200	1.7156E+01	.42300	2.4274E+01	.42400	3.0677E+01
.42500	3.6195E+01	.42600	4.0876E+01	.42700	4.3999E+01	.42800	4.6078E+01	.42900	4.6857E+01
.43000	4.6321E+01	.43100	4.4493E+01	.43200	4.1426E+01	.43300	3.7215E+01	.43400	3.1986E+01
.43500	2.5902E+01	.43600	1.9132E+01	.43700	1.1872E+01	.43800	4.3350E+00	.43900	-3.2610E+00
.44000	-1.0708E+01	.44100	-1.7791E+01	.44200	-2.4306E+01	.44300	-3.0092E+01	.44400	-3.4958E+01
.44500	-3.8803E+01	.44600	-4.1520E+01	.44700	-4.3039E+01	.44800	-4.3523E+01	.44900	-4.2379E+01
.45000	-4.0245E+01	.45100	-3.6993E+01	.45200	-3.2720E+01	.45300	-2.7560E+01	.45400	-2.1667E+01
.45500	-1.5213E+01	.45600	-8.3850E+00	.45700	-1.3800E+00	.45800	5.6020E+00	.45900	1.2367E+01
.46000	1.8725E+01	.46100	2.4502E+01	.46200	2.9545E+01	.46300	3.3713E+01	.46400	3.6893E+01
.46500	3.9010E+01	.46600	4.0015E+01	.46700	3.9879E+01	.46800	3.8617E+01	.46900	3.6278E+01
.47000	3.2931E+01	.47100	2.8691E+01	.47200	2.3694E+01	.47300	1.8079E+01	.47400	1.1998E+01
.47500	5.6020E+00	.47600	-9.4200E-01	.47700	-7.4600E+00	.47800	-1.3761E+01	.47900	-1.9649E+01
.48000	-2.4945E+01	.48100	-2.9503E+01	.48200	-3.3214E+01	.48300	-3.6000E+01	.48400	-3.7811E+01
.48500	-3.8614E+01	.48600	-3.8393E+01	.48700	-3.7144E+01	.48800	-3.4903E+01	.48900	-3.1728E+01
.49000	-2.7707E+01	.49100	-2.2956E+01	.49200	-1.7616E+01	.49300	-1.1842E+01	.49400	-5.8000E+00
.49500	3.3800E-01	.49600	6.4010E+00	.49700	1.2227E+01	.49800	1.7660E+01	.49900	2.2558E+01
.50000	2.6788E+01	.50100	3.0235E+01	.50200	3.2813E+01	.50300	3.4457E+01	.50400	3.5125E+01
.50500	3.4805E+01	.50600	3.3507E+01	.50700	3.1277E+01	.50800	2.8177E+01	.50900	2.4300E+01
.51000	1.9763E+01	.51100	1.4695E+01	.51200	9.2350E+00	.51300	3.5360E+00	.51400	-2.2360E+00
.51500	-7.9040E+00	.51600	-1.3282E+01	.51700	-1.8191E+01	.51800	-2.2486E+01	.51900	-2.6079E+01
.52000	-2.8927E+01	.52100	-3.1005E+01	.52200	-3.2275E+01	.52300	-3.2674E+01	.52400	-3.2129E+01
.52500	-3.0604E+01	.52600	-2.8129E+01	.52700	-2.4805E+01	.52800	-2.0788E+01	.52900	-1.6249E+01
.53000	-1.1348E+01	.53100	-6.2220E+00	.53200	-9.9400E-01	.53300	4.2190E+00	.53400	9.2930E+00
.53500	1.4100E+01	.53600	1.8510E+01	.53700	2.2395E+01	.53800	2.5634E+01	.53900	2.8121E+01
.54000	2.9780E+01	.54100	3.0577E+01	.54200	3.0500E+01	.54300	2.9566E+01	.54400	2.7819E+01
.54500	2.5325E+01	.54600	2.2158E+01	.54700	1.8413E+01	.54800	1.4204E+01	.54900	9.6490E+00
.55000	4.8750E+00	.55100	1.0000E-02	.55200	-4.8200E+00	.55300	-9.4790E+00	.55400	-1.3828E+01
.55500	-1.7744E+01	.55600	-2.1114E+01	.55700	-2.3844E+01	.55800	-2.5868E+01	.55900	-2.7142E+01
.56000	-2.7649E+01	.56100	-2.7383E+01	.56200	-2.6359E+01	.56300	-2.4608E+01	.56400	-2.2177E+01
.56500	-1.9132E+01	.56600	-1.5555E+01	.56700	-1.1549E+01	.56800	-7.2350E+00	.56900	-2.7410E+00
.57000	1.8000E+00	.57100	6.2600E+00	.57200	1.0519E+01	.57300	1.4455E+01	.57400	1.7971E+01
.57500	2.0979E+01	.57600	2.3395E+01	.57700	2.5157E+01	.57800	2.6223E+01	.57900	2.6559E+01
.58000	2.6153E+01	.58100	2.5021E+01	.58200	2.3193E+01	.58300	2.0723E+01	.58400	1.7681E+01
.58500	1.4157E+01	.58600	1.0258E+01	.58700	6.0950E+00	.58800	1.7850E+00	.58900	-2.5490E+00
.59000	-6.7870E+00	.59100	-1.0814E+01	.59200	-1.4524E+01	.59300	-1.7814E+01	.59400	-2.0593E+01
.59500	-2.2787E+01	.59600	-2.4336E+01	.59700	-2.5203E+01	.59800	-2.5361E+01	.59900	-2.4813E+01
.60000	-2.3581E+01	.60100	-2.1704E+01	.60200	-1.9241E+01	.60300	-1.6264E+01	.60400	-1.2857E+01
.60500	-9.1190E+00	.60600	-5.1560E+00	.60700	-1.0750E+00	.60800	3.0090E+00	.60900	6.9790E+00
.61000	1.0730E+01	.61100	1.4160E+01	.61200	1.7175E+01	.61300	1.9698E+01	.61400	2.1663E+01

.61500	2.3024E+01	.61600	2.3750E+01	.61700	2.3828E+01	.61800	2.3265E+01	.61900	2.2079E+01
.62000	2.0308E+01	.62100	1.8010E+01	.62200	1.5253E+01	.62300	1.2113E+01	.62400	8.6780E+00
.62500	5.0490E+00	.62600	1.3310E+00	.62700	-2.3750E+00	.62800	-5.9700E+00	.62900	-9.3570E+00
.63000	-1.2442E+01	.63100	-1.5146E+01	.63200	-1.7403E+01	.63300	-1.9156E+01	.63400	-2.0365E+01
.63500	-2.0999E+01	.63600	-2.1052E+01	.63700	-2.0530E+01	.63800	-1.9449E+01	.63900	-1.7846E+01
.64000	-1.5773E+01	.64100	-1.3290E+01	.64200	-1.0471E+01	.64300	-7.3960E+00	.64400	-4.1490E+00
.64500	-8.2400E-01	.64600	2.4850E+00	.64700	5.6920E+00	.64800	8.7070E+00	.64900	1.1453E+01
.65000	1.3856E+01	.65100	1.5852E+01	.65200	1.7392E+01	.65300	1.8437E+01	.65400	1.8964E+01
.65500	1.8966E+01	.65600	1.8445E+01	.65700	1.7420E+01	.65800	1.5927E+01	.65900	1.4013E+01
.66000	1.1734E+01	.66100	9.1550E+00	.66200	6.3510E+00	.66300	3.4060E+00	.66400	3.9900E-01
.66500	-2.5860E+00	.66600	-5.4610E+00	.66700	-8.1510E+00	.66800	-1.0583E+01	.66900	-1.2696E+01
.67000	-1.4440E+01	.67100	-1.5774E+01	.67200	-1.6669E+01	.67300	-1.7114E+01	.67400	-1.7105E+01
.67500	-1.6636E+01	.67600	-1.5706E+01	.67700	-1.4325E+01	.67800	-1.2520E+01	.67900	-1.0361E+01
.68000	-7.9560E+00	.68100	-5.4180E+00	.68200	-2.8460E+00	.68300	-3.0700E-01	.68400	2.1770E+00
.68500	4.5910E+00	.68600	6.8980E+00	.68700	9.0260E+00	.68800	1.0882E+01	.68900	1.2375E+01
.69000	1.3434E+01	.69100	1.4025E+01	.69200	1.4152E+01	.69300	1.3841E+01	.69400	1.3126E+01
.69500	1.2047E+01	.69600	1.0647E+01	.69700	8.9670E+00	.69800	7.0490E+00	.69900	4.9340E+00
.70000	2.6780E+00	.70100	3.4300E-01	.70200	-2.0030E+00	.70300	-4.2840E+00	.70400	-6.4270E+00
.70500	-8.3700E+00	.70600	-1.0060E+01	.70700	-1.1442E+01	.70800	-1.2478E+01	.70900	-1.3148E+01
.71000	-1.3438E+01	.71100	-1.3348E+01	.71200	-1.2891E+01	.71300	-1.2087E+01	.71400	-1.0960E+01
.71500	-9.5380E+00	.71600	-7.8590E+00	.71700	-5.9650E+00	.71800	-3.8960E+00	.71900	-1.7060E+00
.72000	5.3400E-01	.72100	2.7530E+00	.72200	4.8640E+00	.72300	6.7920E+00	.72400	8.4800E+00
.72500	9.8960E+00	.72600	1.1033E+01	.72700	1.1886E+01	.72800	1.2441E+01	.72900	1.2679E+01
.73000	1.2569E+01	.73100	1.2090E+01	.73200	1.1248E+01	.73300	1.0070E+01	.73400	8.6020E+00
.73500	6.9070E+00	.73600	5.0440E+00	.73700	3.0780E+00	.73800	1.0670E+00	.73900	-9.3500E-01
.74000	-2.8800E+00	.74100	-4.7230E+00	.74200	-6.4230E+00	.74300	-7.9320E+00	.74400	-9.2060E+00
.74500	-1.0214E+01	.74600	-1.0920E+01	.74700	-1.1300E+01	.74800	-1.1345E+01	.74900	-1.1057E+01
.75000	-1.0444E+01	.75100	-9.5300E+00	.75200	-8.3450E+00	.75300	-6.9310E+00	.75400	-5.3320E+00
.75500	-3.5950E+00	.75600	-1.7660E+00	.75700	1.0300E-01	.75800	1.9630E+00	.75900	3.7700E+00
.76000	5.4630E+00	.76100	6.9900E+00	.76200	8.3100E+00	.76300	9.3810E+00	.76400	1.0174E+01
.76500	1.0668E+01	.76600	1.0853E+01	.76700	1.0732E+01	.76800	1.0312E+01	.76900	9.6080E+00
.77000	8.6370E+00	.77100	7.4240E+00	.77200	6.0080E+00	.77300	4.4250E+00	.77400	2.7210E+00
.77500	9.4700E-01	.77600	-8.4100E-01	.77700	-2.5910E+00	.77800	-4.2510E+00	.77900	-5.7730E+00
.78000	-7.1180E+00	.78100	-8.2500E+00	.78200	-9.1400E+00	.78300	-9.7650E+00	.78400	-1.0111E+01
.78500	-1.0172E+01	.78600	-9.9440E+00	.78700	-9.4360E+00	.78800	-8.6600E+00	.78900	-7.6380E+00
.79000	-6.4000E+00	.79100	-4.9810E+00	.79200	-3.4210E+00	.79300	-1.7680E+00	.79400	-6.8000E-02
.79500	1.6300E+00	.79600	3.2790E+00	.79700	4.8330E+00	.79800	6.2520E+00	.79900	7.4960E+00
.80000	8.5330E+00	.80100	9.3350E+00	.80200	9.8810E+00	.80300	1.0158E+01	.80400	1.0158E+01
.80500	9.8800E+00	.80600	9.3390E+00	.80700	8.5470E+00	.80800	7.5300E+00	.80900	6.3180E+00
.81000	4.9440E+00	.81100	3.4460E+00	.81200	1.8700E+00	.81300	2.5900E-01	.81400	-1.3470E+00
.81500	-2.9020E+00	.81600	-4.3620E+00	.81700	-5.6850E+00	.81800	-6.8390E+00	.81900	-7.7930E+00
.82000	-8.5170E+00	.82100	-8.9980E+00	.82200	-9.2240E+00	.82300	-9.1870E+00	.82400	-8.8940E+00
.82500	-8.3540E+00	.82600	-7.5850E+00	.82700	-6.6070E+00	.82800	-5.4470E+00	.82900	-4.1400E+00
.83000	-2.7240E+00	.83100	-1.2380E+00	.83200	2.7700E-01	.83300	1.7780E+00	.83400	3.2230E+00
.83500	4.5690E+00	.83600	5.7820E+00	.83700	6.8300E+00	.83800	7.6810E+00	.83900	8.3150E+00
.84000	8.7160E+00	.84100	8.8730E+00	.84200	8.7870E+00	.84300	8.4630E+00	.84400	7.9070E+00
.84500	7.1370E+00	.84600	6.1820E+00	.84700	5.0650E+00	.84800	3.8200E+00	.84900	2.4830E+00
.85000	1.0940E+00	.85100	-3.0900E-01	.85200	-1.6890E+00	.85300	-3.0050E+00	.85400	-4.2190E+00
.85500	-5.2990E+00	.85600	-6.2180E+00	.85700	-6.9550E+00	.85800	-7.4910E+00	.85900	-7.8170E+00
.86000	-7.9310E+00	.86100	-7.8350E+00	.86200	-7.5400E+00	.86300	-7.0590E+00	.86400	-6.3970E+00
.86500	-5.5560E+00	.86600	-4.5430E+00	.86700	-3.3800E+00	.86800	-2.1170E+00	.86900	-8.2800E-01
.87000	4.1200E-01	.87100	1.5540E+00	.87200	2.5790E+00	.87300	3.4990E+00	.87400	4.3350E+00
.87500	5.0840E+00	.87600	5.7090E+00	.87700	6.1630E+00	.87800	6.4020E+00	.87900	6.3920E+00
.88000	6.1350E+00	.88100	5.6530E+00	.88200	4.9810E+00	.88300	4.1590E+00	.88400	3.2180E+00
.88500	2.1920E+00	.88600	1.1070E+00	.88700	-1.4000E-02	.88800	-1.1510E+00	.88900	-2.2800E+00
.89000	-3.3680E+00	.89100	-4.3840E+00	.89200	-5.2930E+00	.89300	-6.0600E+00	.89400	-6.6620E+00
.89500	-7.0790E+00	.89600	-7.2960E+00	.89700	-7.3090E+00	.89800	-7.1180E+00	.89900	-6.7260E+00
.90000	-6.1530E+00	.90100	-5.4210E+00	.90200	-4.5490E+00	.90300	-3.5590E+00	.90400	-2.4780E+00
.90500	-1.3270E+00	.90600	-1.3600E-01	.90700	1.0620E+00	.90800	2.2440E+00	.90900	3.3840E+00
.91000	4.4460E+00	.91100	5.3980E+00	.91200	6.1900E+00	.91300	6.7890E+00	.91400	7.1730E+00
.91500	7.3460E+00	.91600	7.3260E+00	.91700	7.1390E+00	.91800	6.7990E+00	.91900	6.3040E+00
.92000	5.6470E+00	.92100	4.8250E+00	.92200	3.8500E+00	.92300	2.7510E+00	.92400	1.5740E+00
.92500	3.6400E-01	.92600	-8.3600E-01	.92700	-1.9860E+00	.92800	-3.0510E+00	.92900	-4.0100E+00
.93000	-4.8440E+00	.93100	-5.5400E+00	.93200	-6.0850E+00	.93300	-6.4670E+00	.93400	-6.6740E+00
.93500	-6.6970E+00	.93600	-6.5300E+00	.93700	-6.1750E+00	.93800	-5.6420E+00	.93900	-4.9490E+00
.94000	-4.1160E+00	.94100	-3.1660E+00	.94200	-2.1310E+00	.94300	-1.0430E+00	.94400	6.6000E-02

.94500	1.1630E+00	.94600	2.2250E+00	.94700	3.2250E+00	.94800	4.1380E+00	.94900	4.9440E+00
.95000	5.6170E+00	.95100	6.1340E+00	.95200	6.4810E+00	.95300	6.6470E+00	.95400	6.6290E+00
.95500	6.4300E+00	.95600	6.0590E+00	.95700	5.5300E+00	.95800	4.8630E+00	.95900	4.0740E+00
.96000	3.1840E+00	.96100	2.2200E+00	.96200	1.2060E+00	.96300	1.6300E-01	.96400	-8.7600E-01
.96500	-1.8770E+00	.96600	-2.8140E+00	.96700	-3.6590E+00	.96800	-4.3850E+00	.96900	-4.9770E+00
.97000	-5.4180E+00	.97100	-5.6970E+00	.97200	-5.8100E+00	.97300	-5.7590E+00	.97400	-5.5470E+00
.97500	-5.1770E+00	.97600	-4.6640E+00	.97700	-4.0230E+00	.97800	-3.2670E+00	.97900	-2.4180E+00
.98000	-1.5030E+00	.98100	-5.4800E-01	.98200	4.2500E-01	.98300	1.3810E+00	.98400	2.2950E+00
.98500	3.1400E+00	.98600	3.8910E+00	.98700	4.5310E+00	.98800	5.0440E+00	.98900	5.4130E+00
.99000	5.6280E+00	.99100	5.6900E+00	.99200	5.5940E+00	.99300	5.3400E+00	.99400	4.9410E+00
.99500	4.4060E+00	.99600	3.7480E+00	.99700	2.9920E+00	.99800	2.1570E+00	.99900	1.7220E+00

TIME FUNCTION NUMBER = (3)

FUNCTION DESCRIPTION = (NODE 1 Z GROUND ACCELERATION

NUMBER OF ABSCISSAE = (1000)
FUNCTION SCALE FACTOR = (.1000E+01)

TIME VALUE	FUNCTION	TIME VALUE	FUNCTION	TIME VALUE	FUNCTION	TIME VALUE	FUNCTION	TIME VALUE	FUNCTION
.00000	2.2130E+00	.00100	6.4670E+00	.00200	1.0721E+01	.00300	2.0181E+01	.00400	3.3685E+01
.00500	5.3880E+01	.00600	7.8832E+01	.00700	1.0311E+02	.00800	1.2229E+02	.00900	1.3507E+02
.01000	1.4215E+02	.01100	1.8771E+02	.01200	2.5277E+02	.01300	2.4407E+02	.01400	1.9892E+02
.01500	1.3300E+02	.01600	2.5947E+01	.01700	-5.5184E+01	.01800	-9.8714E+01	.01900	-1.2417E+02
.02000	-1.4254E+02	.02100	-1.7087E+02	.02200	-2.1084E+02	.02300	-2.5835E+02	.02400	-3.0705E+02
.02500	-3.5317E+02	.02600	-3.9365E+02	.02700	-4.2281E+02	.02800	-4.3246E+02	.02900	-4.1567E+02
.03000	-3.7106E+02	.03100	-3.0445E+02	.03200	-2.2683E+02	.03300	-1.4965E+02	.03400	-7.9996E+01
.03500	-1.7888E+01	.03600	4.2241E+01	.03700	1.1774E+02	.03800	2.8902E+02	.03900	4.5653E+02
.04000	4.9753E+02	.04100	5.3189E+02	.04200	5.0640E+02	.04300	3.7081E+02	.04400	2.3211E+02
.04500	1.2650E+02	.04600	5.9536E+01	.04700	3.4164E+01	.04800	4.5222E+01	.04900	6.0480E+01
.05000	5.1344E+01	.05100	4.7860E+00	.05200	-8.0439E+01	.05300	-1.2483E+02	.05400	-2.5043E+01
.05500	9.3153E+01	.05600	1.1643E+02	.05700	8.9346E+01	.05800	-2.8463E+01	.05900	-1.8608E+02
.06000	-3.7793E+02	.06100	-2.8200E+02	.06200	-2.0852E+02	.06300	-1.0541E+02	.06400	-1.6697E+01
.06500	3.5724E+01	.06600	5.3229E+01	.06700	4.7161E+01	.06800	2.6631E+01	.06900	-3.2410E+00
.07000	-3.6912E+01	.07100	-6.5204E+01	.07200	-7.7474E+01	.07300	-6.7466E+01	.07400	-3.8443E+01
.07500	-3.5400E+00	.07600	2.0152E+01	.07700	2.1091E+01	.07800	5.5300E-01	.07900	-2.7429E+01
.08000	-3.5672E+01	.08100	2.9682E+01	.08200	1.1573E+02	.08300	1.3347E+02	.08400	1.1398E+02
.08500	4.9640E+01	.08600	-4.4028E+01	.08700	-8.0327E+01	.08800	2.0847E+01	.08900	2.0169E+02
.09000	3.3621E+02	.09100	4.1246E+02	.09200	3.8871E+02	.09300	2.7057E+02	.09400	1.3591E+02
.09500	2.6655E+01	.09600	-3.5572E+01	.09700	-5.8939E+01	.09800	-6.3384E+01	.09900	-6.6113E+01
.10000	-7.6034E+01	.10100	-9.5993E+01	.10200	-1.2719E+02	.10300	-1.6915E+02	.10400	-2.1660E+02
.10500	-2.5763E+02	.10600	-2.7676E+02	.10700	-2.6197E+02	.10800	-2.1174E+02	.10900	-1.3744E+02
.11000	-5.9133E+01	.11100	3.6280E+00	.11200	4.0721E+01	.11300	5.5131E+01	.11400	5.9431E+01
.11500	6.7591E+01	.11600	8.7118E+01	.11700	1.1575E+02	.11800	1.4378E+02	.11900	1.5993E+02
.12000	1.5713E+02	.12100	1.3538E+02	.12200	1.0078E+02	.12300	6.1984E+01	.12400	2.6402E+01
.12500	-2.1560E+00	.12600	-2.3581E+01	.12700	-4.0035E+01	.12800	-5.4128E+01	.12900	-6.7606E+01
.13000	-8.0874E+01	.13100	-9.3134E+01	.13200	-1.0280E+02	.13300	-1.0797E+02	.13400	-1.0696E+02
.13500	-9.8818E+01	.13600	-8.3784E+01	.13700	-6.3475E+01	.13800	-4.0550E+01	.13900	-1.7988E+01
.14000	1.8220E+00	.14100	1.7742E+01	.14200	2.9890E+01	.14300	3.9116E+01	.14400	4.6243E+01
.14500	5.1428E+01	.14600	5.4033E+01	.14700	5.2962E+01	.14800	4.7226E+01	.14900	3.6587E+01
.15000	2.1515E+01	.15100	3.2940E+00	.15200	-1.6395E+01	.15300	-3.5775E+01	.15400	-5.3181E+01
.15500	-6.7164E+01	.15600	-7.6609E+01	.15700	-8.0834E+01	.15800	-7.9700E+01	.15900	-7.3661E+01
.16000	-6.3651E+01	.16100	-5.0834E+01	.16200	-3.6363E+01	.16300	-2.1192E+01	.16400	-6.0650E+00
.16500	8.3680E+00	.16600	2.1410E+01	.16700	3.2264E+01	.16800	4.0118E+01	.16900	4.4345E+01
.17000	4.4705E+01	.17100	4.1449E+01	.17200	3.5285E+01	.17300	2.7213E+01	.17400	1.8313E+01
.17500	9.5620E+00	.17600	1.7490E+00	.17700	-4.5540E+00	.17800	-8.9540E+00	.17900	-1.1193E+01
.18000	-1.1116E+01	.18100	-8.6690E+00	.18200	-3.9030E+00	.18300	3.0000E+00	.18400	1.1724E+01
.18500	2.1802E+01	.18600	3.2610E+01	.18700	4.3404E+01	.18800	5.3363E+01	.18900	6.1672E+01
.19000	6.7612E+01	.19100	7.0630E+01	.19200	7.0390E+01	.19300	6.6774E+01	.19400	5.9844E+01
.19500	4.9808E+01	.19600	3.6982E+01	.19700	2.1761E+01	.19800	4.6430E+00	.19900	-1.3762E+01
.20000	-3.2719E+01	.20100	-5.1376E+01	.20200	-6.8790E+01	.20300	-8.3977E+01	.20400	-9.5984E+01
.20500	-1.0396E+02	.20600	-1.0722E+02	.20700	-1.0531E+02	.20800	-9.8023E+01	.20900	-8.5453E+01
.21000	-7.7973E+01	.21100	-4.6229E+01	.21200	-2.1117E+01	.21300	6.2460E+00	.21400	3.4573E+01
.21500	6.2482E+01	.21600	8.8569E+01	.21700	1.1151E+02	.21800	1.3014E+02	.21900	1.4357E+02
.22000	1.5119E+02	.22100	1.5276E+02	.22200	1.4834E+02	.22300	1.3829E+02	.22400	1.2322E+02
.22500	1.0392E+02	.22600	8.1322E+01	.22700	5.6437E+01	.22800	3.0344E+01	.22900	4.1410E+00
.23000	-2.1115E+01	.23100	-4.4457E+01	.23200	-6.5061E+01	.23300	-8.2300E+01	.23400	-9.5771E+01
.23500	-1.0531E+02	.23600	-1.1095E+02	.23700	-1.1292E+02	.23800	-1.1158E+02	.23900	-1.0737E+02
.24000	-1.0075E+02	.24100	-9.2224E+01	.24200	-8.2266E+01	.24300	-7.1342E+01	.24400	-5.9888E+01
.24500	-4.8292E+01	.24600	-3.6887E+01	.24700	-2.5925E+01	.24800	-1.5572E+01	.24900	-5.9020E+00
.25000	3.0890E+00	.25100	1.1463E+01	.25200	1.9314E+01	.25300	2.6741E+01	.25400	3.3824E+01
.25500	4.0615E+01	.25600	4.7130E+01	.25700	5.3349E+01	.25800	5.9220E+01	.25900	6.4647E+01
.26000	6.9494E+01	.26100	7.3574E+01	.26200	7.6645E+01	.26300	7.8412E+01	.26400	7.8546E+01
.26500	7.6711E+01	.26600	7.2596E+01	.26700	6.5954E+01	.26800	5.6632E+01	.26900	4.4603E+01
.27000	2.9989E+01	.27100	1.3075E+01	.27200	-5.6960E+00	.27300	-2.5731E+01	.27400	-4.6313E+01
.27500	-6.6645E+01	.27600	-8.5879E+01	.27700	-1.0316E+02	.27800	-1.1770E+02	.27900	-1.2878E+02
.28000	-1.3582E+02	.28100	-1.3840E+02	.28200	-1.3627E+02	.28300	-1.2936E+02	.28400	-1.1782E+02

.28500	-1.0199E+02	.28600	-8.2423E+01	.28700	-5.9883E+01	.28800	-3.5278E+01	.28900	-9.6060E+00
.29000	1.6116E+01	.29100	4.0915E+01	.29200	6.3908E+01	.29300	8.4325E+01	.29400	1.0151E+02
.29500	1.1493E+02	.29600	1.2419E+02	.29700	1.2908E+02	.29800	1.2954E+02	.29900	1.2574E+02
.30000	1.1803E+02	.30100	1.0692E+02	.30200	9.3029E+01	.30300	7.7029E+01	.30400	5.9611E+01
.30500	4.1443E+01	.30600	2.3155E+01	.30700	5.3320E+00	.30800	-1.1492E+01	.30900	-2.6847E+01
.31000	-4.0339E+01	.31100	-5.1668E+01	.31200	-6.0640E+01	.31300	-6.7169E+01	.31400	-7.1279E+01
.31500	-7.3088E+01	.31600	-7.2795E+01	.31700	-7.0658E+01	.31800	-6.6969E+01	.31900	-6.2036E+01
.32000	-5.6167E+01	.32100	-4.9654E+01	.32200	-4.2757E+01	.32300	-3.5686E+01	.32400	-2.8595E+01
.32500	-2.1583E+01	.32600	-1.4700E+01	.32700	-7.9570E+00	.32800	-1.3480E+00	.32900	5.1400E+00
.33000	1.1514E+01	.33100	1.7764E+01	.33200	2.3859E+01	.33300	2.9751E+01	.33400	3.5375E+01
.33500	4.0658E+01	.33600	4.5504E+01	.33700	4.9782E+01	.33800	5.3297E+01	.33900	5.5797E+01
.34000	5.7006E+01	.34100	5.6661E+01	.34200	5.4572E+01	.34300	5.0664E+01	.34400	4.4986E+01
.34500	3.7686E+01	.34600	2.8974E+01	.34700	1.9095E+01	.34800	8.3100E+00	.34900	-3.0900E+00
.35000	-1.4767E+01	.35100	-2.6322E+01	.35200	-3.7299E+01	.35300	-4.7216E+01	.35400	-5.5614E+01
.35500	-6.2107E+01	.35600	-6.6412E+01	.35700	-6.8373E+01	.35800	-6.7953E+01	.35900	-6.5250E+01
.36000	-6.0388E+01	.36100	-5.3601E+01	.36200	-4.5169E+01	.36300	-3.5432E+01	.36400	-2.4773E+01
.36500	-1.3617E+01	.36600	-2.4080E+00	.36700	8.4020E+00	.36800	1.8382E+01	.36900	2.7154E+01
.37000	3.4409E+01	.37100	3.9903E+01	.37200	4.3492E+01	.37300	4.5124E+01	.37400	4.4840E+01
.37500	4.2766E+01	.37600	3.9101E+01	.37700	3.4104E+01	.37800	2.8075E+01	.37900	2.1342E+01
.38000	1.4248E+01	.38100	7.1420E+00	.38200	3.6200E-01	.38300	-5.7820E+00	.38400	-1.1021E+01
.38500	-1.5142E+01	.38600	-1.8004E+01	.38700	-1.9547E+01	.38800	-1.9788E+01	.38900	-1.8820E+01
.39000	-1.6796E+01	.39100	-1.3912E+01	.39200	-1.0396E+01	.39300	-6.4880E+00	.39400	-2.4270E+00
.39500	1.5560E+00	.39600	5.2500E+00	.39700	8.4740E+00	.39800	1.1088E+01	.39900	1.2995E+01
.40000	1.4146E+01	.40100	1.4549E+01	.40200	1.4261E+01	.40300	1.3379E+01	.40400	1.2032E+01
.40500	1.0371E+01	.40600	8.5490E+00	.40700	6.7150E+00	.40800	5.0020E+00	.40900	3.5130E+00
.41000	2.3280E+00	.41100	1.4970E+00	.41200	1.0340E+00	.41300	9.3200E-01	.41400	1.1550E+00
.41500	1.6480E+00	.41600	2.3430E+00	.41700	3.1580E+00	.41800	4.0120E+00	.41900	4.8270E+00
.42000	5.5360E+00	.42100	6.0910E+00	.42200	6.4640E+00	.42300	6.6490E+00	.42400	6.6640E+00
.42500	6.5470E+00	.42600	6.3470E+00	.42700	6.1250E+00	.42800	5.9440E+00	.42900	5.8620E+00
.43000	5.9300E+00	.43100	6.1870E+00	.43200	6.6550E+00	.43300	7.3330E+00	.43400	8.1990E+00
.43500	9.2080E+00	.43600	1.0287E+01	.43700	1.1347E+01	.43800	1.2277E+01	.43900	1.2959E+01
.44000	1.3268E+01	.44100	1.3087E+01	.44200	1.2311E+01	.44300	1.0858E+01	.44400	8.6740E+00
.44500	5.7410E+00	.44600	2.0790E+00	.44700	-2.2500E+00	.44800	-7.1440E+00	.44900	-1.2461E+01
.45000	-1.8022E+01	.45100	-2.3626E+01	.45200	-2.9047E+01	.45300	-3.4049E+01	.45400	-3.8401E+01
.45500	-4.1884E+01	.45600	-4.4307E+01	.45700	-4.5512E+01	.45800	-4.5390E+01	.45900	-4.3867E+01
.46000	-4.1003E+01	.46100	-3.6801E+01	.46200	-3.1403E+01	.46300	-2.4979E+01	.46400	-1.7756E+01
.46500	-9.9910E+00	.46600	-1.9660E+00	.46700	6.0150E+00	.46800	1.3642E+01	.46900	2.0625E+01
.47000	2.6699E+01	.47100	3.1640E+01	.47200	3.5265E+01	.47300	3.7445E+01	.47400	3.8109E+01
.47500	3.7233E+01	.47600	3.4850E+01	.47700	3.1043E+01	.47800	2.5943E+01	.47900	1.9728E+01
.48000	1.2618E+01	.48100	4.8670E+00	.48200	-3.2520E+00	.48300	-1.1459E+01	.48400	-1.9491E+01
.48500	-2.7116E+01	.48600	-3.4133E+01	.48700	-4.0367E+01	.48800	-4.5669E+01	.48900	-4.9903E+01
.49000	-5.2950E+01	.49100	-5.4723E+01	.49200	-5.5176E+01	.49300	-5.4310E+01	.49400	-5.2177E+01
.49500	-4.8865E+01	.49600	-4.4485E+01	.49700	-3.9159E+01	.49800	-3.3006E+01	.49900	-2.6147E+01
.50000	-1.8708E+01	.50100	-1.0823E+01	.50200	-2.6430E+00	.50300	5.6690E+00	.50400	1.3941E+01
.50500	2.2002E+01	.50600	2.9693E+01	.50700	3.6864E+01	.50800	4.3375E+01	.50900	4.9102E+01
.51000	5.3931E+01	.51100	5.7746E+01	.51200	6.0443E+01	.51300	6.1926E+01	.51400	6.2123E+01
.51500	6.0999E+01	.51600	5.8553E+01	.51700	5.4827E+01	.51800	4.9901E+01	.51900	4.3875E+01
.52000	3.6876E+01	.52100	2.9057E+01	.52200	2.0582E+01	.52300	1.1637E+01	.52400	2.4380E+00
.52500	-6.7530E+00	.52600	-1.5639E+01	.52700	-2.3902E+01	.52800	-3.1233E+01	.52900	-3.7379E+01
.53000	-4.2151E+01	.53100	-4.5441E+01	.53200	-4.7201E+01	.53300	-4.7400E+01	.53400	-4.6009E+01
.53500	-4.3004E+01	.53600	-3.8388E+01	.53700	-3.2235E+01	.53800	-2.4702E+01	.53900	-1.6042E+01
.54000	-6.5800E+00	.54100	3.3310E+00	.54200	1.3356E+01	.54300	2.3192E+01	.54400	3.2576E+01
.54500	4.1285E+01	.54600	4.9107E+01	.54700	5.5826E+01	.54800	6.1242E+01	.54900	6.5176E+01
.55000	6.7494E+01	.55100	6.8119E+01	.55200	6.7047E+01	.55300	6.4344E+01	.55400	6.0125E+01
.55500	5.4546E+01	.55600	4.7792E+01	.55700	4.0063E+01	.55800	3.1574E+01	.55900	2.2550E+01
.56000	1.3213E+01	.56100	3.7900E+00	.56200	-5.4940E+00	.56300	-1.4422E+01	.56400	-2.2791E+01
.56500	-3.0416E+01	.56600	-3.7138E+01	.56700	-4.2827E+01	.56800	-4.7389E+01	.56900	-5.0771E+01
.57000	-5.2952E+01	.57100	-5.3946E+01	.57200	-5.3788E+01	.57300	-5.2537E+01	.57400	-5.0261E+01
.57500	-4.7043E+01	.57600	-4.2983E+01	.57700	-3.8192E+01	.57800	-3.2797E+01	.57900	-2.6947E+01
.58000	-2.0800E+01	.58100	-1.4517E+01	.58200	-8.2540E+00	.58300	-2.1650E+00	.58400	3.6030E+00
.58500	8.9280E+00	.58600	1.3691E+01	.58700	1.7779E+01	.58800	2.1093E+01	.58900	2.3546E+01
.59000	2.5073E+01	.59100	2.5628E+01	.59200	2.5184E+01	.59300	2.3750E+01	.59400	2.1366E+01
.59500	1.8092E+01	.59600	1.4021E+01	.59700	9.2680E+00	.59800	3.9600E+00	.59900	-1.7540E+00
.60000	-7.7150E+00	.60100	-1.3758E+01	.60200	-1.9712E+01	.60300	-2.5408E+01	.60400	-3.0677E+01
.60500	-3.5366E+01	.60600	-3.9334E+01	.60700	-4.2464E+01	.60800	-4.4664E+01	.60900	-4.5877E+01
.61000	-4.6074E+01	.61100	-4.5261E+01	.61200	-4.3474E+01	.61300	-4.0774E+01	.61400	-3.7251E+01

.61500 -3.3019E+01	.61600 -2.8205E+01	.61700 -2.2954E+01	.61800 -1.7420E+01	.61900 -1.1762E+01
.62000 -6.1410E+00	.62100 -7.1100E-01	.62200 4.3920E+00	.62300 9.0450E+00	.62400 1.3148E+01
.62500 1.6626E+01	.62600 1.9426E+01	.62700 2.1525E+01	.62800 2.2922E+01	.62900 2.3639E+01
.63000 2.3718E+01	.63100 2.3221E+01	.63200 2.2222E+01	.63300 2.0810E+01	.63400 1.9081E+01
.63500 1.7134E+01	.63600 1.5064E+01	.63700 1.2963E+01	.63800 1.0918E+01	.63900 9.0020E+00
.64000 7.2740E+00	.64100 5.7840E+00	.64200 4.5610E+00	.64300 3.6250E+00	.64400 2.9890E+00
.64500 2.6460E+00	.64600 2.5800E+00	.64700 2.7760E+00	.64800 3.2030E+00	.64900 3.8320E+00
.65000 4.6320E+00	.65100 5.5650E+00	.65200 6.5980E+00	.65300 7.7030E+00	.65400 8.8490E+00
.65500 1.0007E+01	.65600 1.1156E+01	.65700 1.2276E+01	.65800 1.3348E+01	.65900 1.4355E+01
.66000 1.5279E+01	.66100 1.6107E+01	.66200 1.6826E+01	.66300 1.7424E+01	.66400 1.7889E+01
.66500 1.8213E+01	.66600 1.8390E+01	.66700 1.8411E+01	.66800 1.8275E+01	.66900 1.7987E+01
.67000 1.7558E+01	.67100 1.6992E+01	.67200 1.6297E+01	.67300 1.5484E+01	.67400 1.4570E+01
.67500 1.3575E+01	.67600 1.2531E+01	.67700 1.1483E+01	.67800 1.0475E+01	.67900 9.5410E+00
.68000 8.7090E+00	.68100 7.9890E+00	.68200 7.3690E+00	.68300 6.8310E+00	.68400 6.3530E+00
.68500 5.9120E+00	.68600 5.5120E+00	.68700 5.1730E+00	.68800 4.9070E+00	.68900 4.7080E+00
.69000 4.5370E+00	.69100 4.3110E+00	.69200 3.9290E+00	.69300 3.3080E+00	.69400 2.4020E+00
.69500 1.2200E+00	.69600 -1.9200E-01	.69700 -1.7720E+00	.69800 -3.4750E+00	.69900 -5.2870E+00
.70000 -7.2160E+00	.70100 -9.2730E+00	.70200 -1.1446E+01	.70300 -1.3683E+01	.70400 -1.5896E+01
.70500 -1.7973E+01	.70600 -1.9803E+01	.70700 -2.1295E+01	.70800 -2.2393E+01	.70900 -2.3077E+01
.71000 -2.3342E+01	.71100 -2.3195E+01	.71200 -2.2642E+01	.71300 -2.1688E+01	.71400 -2.0356E+01
.71500 -1.8671E+01	.71600 -1.6681E+01	.71700 -1.4446E+01	.71800 -1.2041E+01	.71900 -9.5560E+00
.72000 -7.0810E+00	.72100 -4.7080E+00	.72200 -2.5300E+00	.72300 -6.3000E-01	.72400 9.2100E-01
.72500 2.0590E+00	.72600 2.7410E+00	.72700 2.9570E+00	.72800 2.7100E+00	.72900 2.0240E+00
.73000 9.3400E-01	.73100 -5.2400E-01	.73200 -2.3150E+00	.73300 -4.4030E+00	.73400 -6.7560E+00
.73500 -9.3130E+00	.73600 -1.1983E+01	.73700 -1.4661E+01	.73800 -1.7235E+01	.73900 -1.9598E+01
.74000 -2.1675E+01	.74100 -2.3413E+01	.74200 -2.4785E+01	.74300 -2.5774E+01	.74400 -2.6352E+01
.74500 -2.6496E+01	.74600 -2.6169E+01	.74700 -2.5332E+01	.74800 -2.3969E+01	.74900 -2.2088E+01
.75000 -1.9721E+01	.75100 -1.6921E+01	.75200 -1.3755E+01	.75300 -1.0290E+01	.75400 -6.5900E+00
.75500 -2.7190E+00	.75600 1.2600E+00	.75700 5.2820E+00	.75800 9.2710E+00	.75900 1.3149E+01
.76000 1.6828E+01	.76100 2.0218E+01	.76200 2.3235E+01	.76300 2.5801E+01	.76400 2.7851E+01
.76500 2.9329E+01	.76600 3.0201E+01	.76700 3.0447E+01	.76800 3.0060E+01	.76900 2.9051E+01
.77000 2.7443E+01	.77100 2.5268E+01	.77200 2.2576E+01	.77300 1.9435E+01	.77400 1.5923E+01
.77500 1.2136E+01	.77600 8.1850E+00	.77700 4.1900E+00	.77800 2.7600E-01	.77900 -3.4400E+00
.78000 -6.8420E+00	.78100 -9.8230E+00	.78200 -1.2296E+01	.78300 -1.4187E+01	.78400 -1.5436E+01
.78500 -1.5994E+01	.78600 -1.5837E+01	.78700 -1.4962E+01	.78800 -1.3382E+01	.78900 -1.1136E+01
.79000 -8.2850E+00	.79100 -4.9110E+00	.79200 -1.1130E+00	.79300 2.9980E+00	.79400 7.2990E+00
.79500 1.1665E+01	.79600 1.5973E+01	.79700 2.0098E+01	.79800 2.3922E+01	.79900 2.7339E+01
.80000 3.0252E+01	.80100 3.2575E+01	.80200 3.4241E+01	.80300 3.5199E+01	.80400 3.5419E+01
.80500 3.4896E+01	.80600 3.3639E+01	.80700 3.1677E+01	.80800 2.9065E+01	.80900 2.5868E+01
.81000 2.2165E+01	.81100 1.8045E+01	.81200 1.3604E+01	.81300 8.9510E+00	.81400 4.1880E+00
.81500 -5.7700E-01	.81600 -5.2340E+00	.81700 -9.6830E+00	.81800 -1.3825E+01	.81900 -1.7574E+01
.82000 -2.0854E+01	.82100 -2.3601E+01	.82200 -2.5768E+01	.82300 -2.7318E+01	.82400 -2.8232E+01
.82500 -2.8505E+01	.82600 -2.8143E+01	.82700 -2.7171E+01	.82800 -2.5626E+01	.82900 -2.3555E+01
.83000 -2.1020E+01	.83100 -1.8094E+01	.83200 -1.4857E+01	.83300 -1.1398E+01	.83400 -7.8080E+00
.83500 -4.1870E+00	.83600 -6.2800E-01	.83700 2.7740E+00	.83800 5.9310E+00	.83900 8.7570E+00
.84000 1.1178E+01	.84100 1.3129E+01	.84200 1.4557E+01	.84300 1.5423E+01	.84400 1.5703E+01
.84500 1.5387E+01	.84600 1.4483E+01	.84700 1.3017E+01	.84800 1.1027E+01	.84900 8.5680E+00
.85000 5.7070E+00	.85100 2.5240E+00	.85200 -8.9200E-01	.85300 -4.4490E+00	.85400 -8.0460E+00
.85500 -1.1584E+01	.85600 -1.4966E+01	.85700 -1.8096E+01	.85800 -2.0884E+01	.85900 -2.3253E+01
.86000 -2.5142E+01	.86100 -2.6504E+01	.86200 -2.7309E+01	.86300 -2.7546E+01	.86400 -2.7212E+01
.86500 -2.6313E+01	.86600 -2.4869E+01	.86700 -2.2913E+01	.86800 -2.0490E+01	.86900 -1.7672E+01
.87000 -1.4543E+01	.87100 -1.1206E+01	.87200 -7.7710E+00	.87300 -4.3420E+00	.87400 -1.0090E+00
.87500 2.1640E+00	.87600 5.1390E+00	.87700 7.8870E+00	.87800 1.0370E+01	.87900 1.2533E+01
.88000 1.4304E+01	.88100 1.5611E+01	.88200 1.6406E+01	.88300 1.6687E+01	.88400 1.6499E+01
.88500 1.5920E+01	.88600 1.5032E+01	.88700 1.3900E+01	.88800 1.2559E+01	.88900 1.1024E+01
.89000 9.3030E+00	.89100 7.4200E+00	.89200 5.4280E+00	.89300 3.4050E+00	.89400 1.4400E+00
.89500 -3.8400E-01	.89600 -2.0050E+00	.89700 -3.3930E+00	.89800 -4.5360E+00	.89900 -5.4380E+00
.90000 -6.1000E+00	.90100 -6.5180E+00	.90200 -6.6830E+00	.90300 -6.5830E+00	.90400 -6.2180E+00
.90500 -5.5960E+00	.90600 -4.7360E+00	.90700 -3.6690E+00	.90800 -2.4280E+00	.90900 -1.0510E+00
.91000 4.2300E-01	.91100 1.9530E+00	.91200 3.4970E+00	.91300 5.0180E+00	.91400 6.4700E+00
.91500 7.8080E+00	.91600 9.0000E+00	.91700 1.0018E+01	.91800 1.0842E+01	.91900 1.1467E+01
.92000 1.1890E+01	.92100 1.2107E+01	.92200 1.2105E+01	.92300 1.1866E+01	.92400 1.1377E+01
.92500 1.0643E+01	.92600 9.6870E+00	.92700 8.5580E+00	.92800 7.3130E+00	.92900 6.0070E+00
.93000 4.6820E+00	.93100 3.3620E+00	.93200 2.0550E+00	.93300 7.7000E-01	.93400 -4.7400E-01
.93500 -1.6460E+00	.93600 -2.7060E+00	.93700 -3.6120E+00	.93800 -4.3330E+00	.93900 -4.8540E+00
.94000 -5.1840E+00	.94100 -5.3410E+00	.94200 -5.3520E+00	.94300 -5.2410E+00	.94400 -5.0300E+00

.94500 -4.7330E+00	.94600 -4.3600E+00	.94700 -3.9260E+00	.94800 -3.4500E+00	.94900 -2.9540E+00
.95000 -2.4620E+00	.95100 -2.0000E+00	.95200 -1.5880E+00	.95300 -1.2420E+00	.95400 -9.7200E-01
.95500 -7.7900E-01	.95600 -6.5800E-01	.95700 -6.0100E-01	.95800 -5.9400E-01	.95900 -6.2500E-01
.96000 -6.8300E-01	.96100 -7.5700E-01	.96200 -8.3900E-01	.96300 -9.2100E-01	.96400 -9.9600E-01
.96500 -1.0530E+00	.96600 -1.0840E+00	.96700 -1.0790E+00	.96800 -1.0310E+00	.96900 -9.3700E-01
.97000 -8.0000E-01	.97100 -6.2700E-01	.97200 -4.3000E-01	.97300 -2.2100E-01	.97400 -1.5000E-02
.97500 1.7800E-01	.97600 3.4900E-01	.97700 4.9100E-01	.97800 6.0000E-01	.97900 6.7100E-01
.98000 6.9700E-01	.98100 6.7400E-01	.98200 6.0000E-01	.98300 4.7300E-01	.98400 2.9500E-01
.98500 7.2000E-02	.98600 -1.8800E-01	.98700 -4.7100E-01	.98800 -7.6600E-01	.98900 -1.0590E+00
.99000 -1.3370E+00	.99100 -1.5890E+00	.99200 -1.8020E+00	.99300 -1.9690E+00	.99400 -2.0790E+00
.99500 -2.1250E+00	.99600 -2.0990E+00	.99700 -1.9930E+00	.99800 -1.8030E+00	.99900 -1.6870E+00

SUPPORT GROUP NUMBER = 2

CONTROL INFORMATION

NUMBER OF TIME FUNCTIONS	=	1
GROUND MOTION INDICATOR	=	1
EQ.0, NONE		
EQ.1, GROUND INPUT		
NUMBER OF ARRIVAL TIMES	=	1
NUMBER OF TIME STEPS	=	9980
OUTPUT PRINT INTERVAL	=	10
TIME STEP	=	.00010
DAMPING FACTOR	=	.02000

GROUND ACCELERATION INPUT

	X-DIRECTION	Y-DIRECTION	Z-DIRECTION
TIME FUNCTION NUMBER(S) =	1	1	1
ARRIVAL TIME NUMBER(S) =	1	1	1

ARRIVAL TIME VALUES

ENTRY NUMBER	ARRIVAL TIME VALUE
1	.000000

```
TIME FUNCTION NUMBER      = (   1)

FUNCTION DESCRIPTION      = ( ZERO GROUND ACCELERATION

NUMBER OF ABSCISSAE       = (   2)
FUNCTION SCALE FACTOR     = (    .1000E+01)

 TIME VALUE     FUNCTION  TIME VALUE     FUNCTION  TIME VALUE     FUNCTION  TIME VALUE     FUNCTION  TIME VALUE     FUNCTION
     .00000  0.0000E+00       .99900  0.0000E+00
```

DYNAMIC RESPONSES

D I S P L A C E M E N T M A X I M A.

NODE NUMBER	DISPLACEMENT COMPONENT	MAXIMUM VALUE	TIME AT MAXIMUM	DISPLACEMENT COMPONENT	MAXIMUM VALUE	TIME AT MAXIMUM
1	1	2.0760E-10	1.0700E-01	4	1.6156E-10	5.1000E-02
	2	1.0596E-10	3.2000E-02	5	1.0125E-11	7.7000E-02
	3	3.0566E-10	6.7000E-02	6	1.3765E-10	1.0700E-01
101	1	1.9513E-03	1.0700E-01	4	1.5828E-04	5.1000E-02
	2	2.1228E-05	3.2000E-02	5	1.5917E-05	7.7000E-02
	3	2.2887E-03	5.1000E-02	6	1.3672E-04	1.0700E-01
2	1	6.4378E-03	1.0700E-01	4	2.4380E-04	5.1000E-02
	2	4.2330E-05	3.2000E-02	5	3.1833E-05	7.7000E-02
	3	7.4496E-03	5.1000E-02	6	2.1505E-04	1.0700E-01
3	1	1.2104E-02	1.0700E-01	4	2.6270E-04	5.2000E-02
	2	6.3181E-05	3.2000E-02	5	4.7750E-05	7.7000E-02
	3	1.3795E-02	5.1000E-02	6	2.3965E-04	1.0700E-01
4	1	1.6054E-02	1.0700E-01	4	2.0292E-04	6.2700E-01
	2	3.9854E-03	5.3000E-02	5	9.3132E-05	1.2400E-01
	3	1.8192E-02	5.1000E-02	6	2.0205E-04	1.0700E-01
401	1	1.4173E-02	1.0700E-01	4	2.4790E-04	6.2700E-01
	2	1.0257E-02	6.2700E-01	5	1.4140E-04	1.2400E-01
	3	1.8237E-02	5.1000E-02	6	1.7705E-04	7.4000E-02
5	1	1.0359E-02	1.0700E-01	4	2.6888E-04	6.2600E-01
	2	1.8654E-02	6.2700E-01	5	1.8500E-04	1.2400E-01
	3	1.8250E-02	5.1000E-02	6	1.5972E-04	7.5000E-02
6	1	7.4003E-03	1.3900E-01	4	2.6765E-04	6.2600E-01
	2	2.7350E-02	6.2700E-01	5	1.9996E-04	7.2000E-02
	3	1.8236E-02	5.1000E-02	6	1.4773E-04	7.6000E-02
7	1	7.7514E-03	1.2900E-01	4	2.4035E-04	6.2700E-01
	2	3.1189E-02	6.2700E-01	5	1.9362E-04	6.9000E-02
	3	1.5558E-02	5.1000E-02	6	1.5240E-04	7.9000E-02
701	1	7.7602E-03	1.2900E-01	4	2.1248E-04	6.2900E-01
	2	2.9327E-02	6.2900E-01	5	1.7644E-04	6.8000E-02
	3	1.1008E-02	5.2000E-02	6	1.7602E-04	2.2500E-01
702	1	7.7712E-03	1.2900E-01	4	1.8551E-04	6.3000E-01
	2	2.6934E-02	6.3000E-01	5	1.6187E-04	4.9000E-02
	3	6.9668E-03	3.8000E-02	6	2.0030E-04	2.2500E-01
703	1	7.7840E-03	1.2900E-01	4	1.6697E-04	1.1200E-01
	2	2.3780E-02	6.3200E-01	5	1.4535E-04	5.0000E-02
	3	6.3350E-03	6.3000E-02	6	2.0179E-04	2.2500E-01
8	1	7.7966E-03	1.2900E-01	4	1.5408E-04	1.1200E-01
	2	2.4320E-02	4.7000E-02	5	1.0483E-04	5.2000E-02
	3	9.1999E-03	6.5000E-02	6	2.1083E-04	5.8300E-01
9	1	7.8060E-03	1.2900E-01	4	1.4277E-04	6.1000E-02
	2	2.6447E-02	8.8000E-02	5	5.8284E-05	5.5000E-02
	3	9.8602E-03	6.6000E-02	6	2.3079E-04	6.8600E-01
10	1	7.8098E-03	1.2900E-01	4	1.3846E-04	6.1000E-02
	2	2.9267E-02	8.8000E-02	5	9.1913E-05	6.5000E-02
	3	7.9500E-03	6.6000E-02	6	2.4327E-04	6.8700E-01

11	1	7.8073E-03	1.2900E-01
	2	3.1119E-02	9.0000E-02
	3	6.3367E-03	8.4800E-01
12	1	7.8001E-03	1.2900E-01
	2	3.2841E-02	9.1000E-02
	3	6.0518E-03	9.1500E-01
13	1	8.1531E-03	1.2900E-01
	2	3.0839E-02	9.1000E-02
	3	5.9072E-03	9.1600E-01
14	1	8.0664E-03	1.2900E-01
	2	2.9674E-02	9.1000E-02
	3	5.8994E-03	9.1600E-01
141	1	6.8479E-03	1.2900E-01
	2	2.4194E-02	9.1000E-02
	3	5.9153E-03	9.1600E-01
142	1	6.2554E-03	1.0700E-01
	2	1.9753E-02	9.1000E-02
	3	5.9307E-03	9.1600E-01
143	1	7.9807E-03	8.4000E-02
	2	1.6839E-02	9.1000E-02
	3	5.9442E-03	9.1600E-01
15	1	9.1272E-03	8.3000E-02
	2	1.5283E-02	9.1000E-02
	3	5.9550E-03	9.1600E-01
16	1	8.9482E-03	8.3000E-02
	2	1.4492E-02	9.0000E-02
	3	5.9620E-03	9.1600E-01
17	1	7.3550E-03	8.2000E-02
	2	1.3494E-02	9.0000E-02
	3	5.9644E-03	9.1600E-01
18	1	4.8907E-03	8.2000E-02
	2	1.4010E-02	7.3800E-01
	3	5.9615E-03	9.1600E-01
19	1	2.5216E-03	8.2000E-02
	2	1.6332E-02	7.4200E-01
	3	5.9533E-03	9.1600E-01
191	1	2.3198E-03	9.7800E-01
	2	1.7592E-02	7.4500E-01
	3	5.9409E-03	9.1600E-01
20	1	4.9285E-03	9.7900E-01
	2	1.7845E-02	7.4800E-01
	3	5.9243E-03	9.1600E-01
21	1	8.0362E-03	9.1400E-01
	2	1.7087E-02	7.5000E-01
	3	5.9045E-03	9.1600E-01
22	1	9.3847E-03	9.1400E-01
	2	1.6278E-02	7.5200E-01
	3	5.3147E-03	9.1600E-01
221	1	1.1710E-02	9.1400E-01
	2	1.5528E-02	7.6100E-01
	4	1.4326E-04	9.2000E-02
	5	1.3344E-04	6.5000E-02
	6	2.4575E-04	6.8700E-01
	4	1.5461E-04	9.1000E-02
	5	1.2789E-04	6.5000E-02
	6	2.3906E-04	6.8800E-01
	4	1.6483E-04	9.1000E-02
	5	5.4366E-05	5.2000E-02
	6	2.1469E-04	6.8900E-01
	4	1.6434E-04	9.1000E-02
	5	4.8803E-05	5.3000E-02
	6	2.1117E-04	6.8900E-01
	4	1.5248E-04	2.1600E-01
	5	6.9270E-05	8.6000E-02
	6	1.9930E-04	2.4500E-01
	4	1.6353E-04	7.3700E-01
	5	7.0434E-05	1.2800E-01
	6	1.9128E-04	2.4500E-01
	4	1.7259E-04	6.7900E-01
	5	7.4506E-05	6.6000E-02
	6	1.8316E-04	2.4500E-01
	4	1.7476E-04	6.8000E-01
	5	6.5786E-05	6.7000E-02
	6	1.7520E-04	2.4600E-01
	4	1.6534E-04	6.8100E-01
	5	4.0883E-05	6.9000E-02
	6	1.8893E-04	9.1400E-01
	4	1.4412E-04	6.8200E-01
	5	6.3434E-05	8.5000E-02
	6	2.1603E-04	9.1400E-01
	4	1.1297E-04	6.8200E-01
	5	7.5113E-05	8.3000E-02
	6	2.4311E-04	9.1400E-01
	4	9.9908E-05	8.9000E-02
	5	5.5042E-05	9.7900E-01
	6	2.7018E-04	9.1400E-01
	4	1.0698E-04	8.9000E-02
	5	7.2896E-05	9.7900E-01
	6	2.9635E-04	9.1500E-01
	4	1.0261E-04	1.2100E-01
	5	8.9478E-05	9.1400E-01
	6	3.2256E-04	9.1500E-01
	4	9.0485E-05	1.2100E-01
	5	1.0271E-04	9.1500E-01
	6	3.4878E-04	9.1500E-01
	4	9.4520E-05	7.3400E-01
	5	1.1259E-04	9.1500E-01
	6	3.6191E-04	9.1500E-01
	4	1.1042E-04	7.3700E-01
	5	1.1422E-04	9.1500E-01

	3	2.9115E-03	9.1600E-01	6	3.7837E-04	9.1500E-01
23	1	1.3951E-02	9.1400E-01	4	1.2257E-04	7.4000E-01
	2	2.1991E-02	9.1200E-01	5	1.0514E-04	9.1500E-01
	3	1.6952E-03	8.4000E-02	6	3.9079E-04	9.1500E-01
231	1	1.5585E-02	9.1500E-01	4	1.2887E-04	7.4100E-01
	2	2.9821E-02	9.1300E-01	5	9.3452E-05	9.1500E-01
	3	1.5327E-03	8.4000E-02	6	3.9885E-04	9.1500E-01
24	1	1.7019E-02	9.1500E-01	4	1.3121E-04	7.4200E-01
	2	3.7728E-02	9.1400E-01	5	8.2231E-05	9.1500E-01
	3	2.6175E-03	9.1400E-01	6	4.0647E-04	9.1500E-01
25	1	1.8705E-02	9.1500E-01	4	1.2156E-04	7.4200E-01
	2	3.9167E-02	9.1400E-01	5	6.0681E-05	9.1700E-01
	3	2.7085E-03	9.1400E-01	6	4.1781E-04	9.1500E-01
251	1	1.9470E-02	9.1500E-01	4	1.1282E-04	7.4100E-01
	2	3.4085E-02	9.1500E-01	5	5.8493E-05	9.1800E-01
	3	1.9129E-03	9.1300E-01	6	4.2203E-04	9.1400E-01
26	1	2.0229E-02	9.1500E-01	4	1.0276E-04	7.4000E-01
	2	2.9037E-02	9.1500E-01	5	6.0486E-05	9.1800E-01
	3	1.8990E-03	1.3400E-01	6	4.2235E-04	9.1400E-01
27	1	2.0069E-02	9.1500E-01	4	8.7773E-05	9.7900E-01
	2	1.8440E-02	9.1500E-01	5	7.9421E-05	9.1700E-01
	3	2.5087E-03	1.5600E-01	6	3.9900E-04	9.1400E-01
271	1	1.8876E-02	9.1500E-01	4	9.4423E-05	9.7900E-01
	2	1.1696E-02	9.1500E-01	5	8.2468E-05	9.1700E-01
	3	2.9064E-03	1.5600E-01	6	3.7950E-04	9.1400E-01
28	1	1.7674E-02	9.1500E-01	4	9.5080E-05	9.1800E-01
	2	5.2027E-03	9.1500E-01	5	8.0416E-05	9.1700E-01
	3	3.2621E-03	1.5600E-01	6	3.5341E-04	9.1400E-01
29	1	1.1410E-02	9.1500E-01	4	6.0477E-05	9.1900E-01
	2	3.3109E-05	9.1300E-01	5	5.3526E-05	9.1700E-01
	3	2.5892E-03	9.2000E-01	6	2.5217E-04	9.1500E-01
291	1	5.4579E-03	9.1500E-01	4	4.2809E-05	9.2000E-01
	2	2.2074E-05	9.1300E-01	5	3.5684E-05	9.1700E-01
	3	1.2015E-03	9.2000E-01	6	1.8733E-04	9.1500E-01
30	1	1.4827E-03	9.1500E-01	4	2.2687E-05	9.2100E-01
	2	1.1037E-05	9.1300E-01	5	1.7842E-05	9.1700E-01
	3	3.1633E-04	9.2100E-01	6	1.0341E-04	9.1500E-01
31	1	5.4126E-11	9.1600E-01	4	1.7669E-11	9.2100E-01
	2	4.9025E-11	9.1300E-01	5	1.0101E-11	9.1700E-01
	3	2.9197E-11	6.6000E-02	6	8.3306E-11	9.1500E-01

ACCELERATION MAXIMA

NODE NUMBER	ACCELERATION COMPONENT	MAXIMUM VALUE	TIME AT MAXIMUM	ACCELERATION COMPONENT	MAXIMUM VALUE	TIME AT MAXIMUM
1	1	1.8016E-08	1.0600E-01	4	1.8571E-08	6.6000E-02
	2	6.1412E-08	3.1000E-02	5	7.3790E-10	4.4000E-02
	3	4.1103E-08	6.6000E-02	6	1.1796E-08	9.0000E-02
101	1	1.6721E-01	9.0000E-02	4	1.6690E-02	6.7000E-02
	2	1.2304E-02	3.1000E-02	5	1.1600E-03	4.4000E-02
	3	2.6196E-01	6.6000E-02	6	1.1715E-02	9.0000E-02
2	1	5.5167E-01	9.0000E-02	4	2.2309E-02	6.7000E-02
	2	2.4524E-02	3.1000E-02	5	2.3199E-03	4.4000E-02
	3	7.8319E-01	6.7000E-02	6	1.8443E-02	9.0000E-02
3	1	1.0380E+00	9.0000E-02	4	2.1846E-02	5.3000E-02
	2	3.6578E-02	3.1000E-02	5	3.4799E-03	4.4000E-02
	3	1.3114E+00	6.7000E-02	6	2.0652E-02	9.0000E-02
4	1	1.3458E+00	9.0000E-02	4	2.5848E-02	2.6000E-02
	2	5.2893E-01	3.7000E-02	5	6.2454E-03	1.2200E-01
	3	1.5097E+00	5.2000E-02	6	1.8022E-02	9.0000E-02
401	1	1.1235E+00	1.0700E-01	4	1.9061E-02	2.7000E-02
	2	1.2429E+00	2.6000E-02	5	1.0173E-02	1.2300E-01
	3	1.5133E+00	5.2000E-02	6	1.4783E-02	8.9000E-02
5	1	7.7709E-01	1.0600E-01	4	2.4711E-02	3.0000E-02
	2	1.5354E+00	2.6000E-02	5	1.3938E-02	8.8000E-02
	3	1.5129E+00	5.2000E-02	6	1.2238E-02	7.4000E-02
6	1	3.6119E-01	9.1000E-02	4	3.8891E-02	3.1000E-02
	2	1.5964E+00	2.8000E-02	5	1.5872E-02	8.8000E-02
	3	1.5091E+00	5.2000E-02	6	1.0475E-02	5.5000E-02
7	1	4.6037E-01	4.1000E-02	4	3.9000E-02	3.1000E-02
	2	1.9653E+00	2.9000E-02	5	1.4476E-02	6.8000E-02
	3	1.3022E+00	5.2000E-02	6	1.0901E-02	1.8600E-02
701	1	4.6015E-01	4.1000E-02	4	3.4487E-02	3.1000E-02
	2	1.8715E+00	2.9000E-02	5	1.4181E-02	6.7000E-02
	3	9.7189E-01	5.2000E-02	6	1.3644E-02	2.5000E-02
702	1	4.5997E-01	4.1000E-02	4	2.9979E-02	3.1000E-02
	2	1.9682E+00	4.1000E-02	5	1.4085E-02	6.7000E-02
	3	6.1064E-01	5.3000E-02	6	1.6300E-02	3.7000E-02
703	1	4.6075E-01	4.1000E-02	4	2.6453E-02	3.8000E-02
	2	2.1779E+00	2.7000E-02	5	1.3409E-02	5.1000E-02
	3	4.0714E-01	4.2000E-02	6	1.2145E-02	6.1000E-02
8	1	4.6275E-01	4.1000E-02	4	2.3499E-02	3.8000E-02
	2	2.0719E+00	2.7000E-02	5	1.0543E-02	5.2000E-02
	3	5.1390E-01	6.5000E-02	6	1.1820E-02	2.5000E-02
9	1	4.6511E-01	4.1000E-02	4	2.0538E-02	3.8000E-02
	2	1.9084E+00	9.1000E-02	5	5.7508E-03	5.4000E-02
	3	6.7155E-01	6.4000E-02	6	1.3518E-02	2.0000E-02
10	1	4.6655E-01	4.1000E-02	4	1.8634E-02	9.3000E-02
	2	1.8734E+00	9.1000E-02	5	5.0412E-03	4.7000E-02
	3	6.1484E-01	6.4000E-02	6	1.1301E-02	6.1000E-02

11	1	4.6635E-01	4.1000E-02	4	1.8818E-02	9.3000E-02
	2	1.9945E+00	9.1000E-02	5	9.5833E-03	6.4000E-02
	3	4.0166E-01	5.2000E-02	6	1.3656E-02	2.5000E-02
12	1	4.6496E-01	4.1000E-02	4	1.9405E-02	9.2000E-02
	2	2.2329E+00	9.1000E-02	5	1.0356E-02	6.4000E-02
	3	1.3282E-01	1.0500E-01	6	2.1113E-02	2.5000E-02
13	1	4.8568E-01	4.1000E-02	4	2.0035E-02	9.2000E-02
	2	2.1555E+00	2.7000E-02	5	4.7538E-03	5.5000E-02
	3	1.6369E-01	6.4000E-02	6	2.0830E-02	2.6000E-02
14	1	4.9423E-01	4.1000E-02	4	1.9791E-02	9.2000E-02
	2	2.1323E+00	2.7000E-02	5	4.2014E-03	5.5000E-02
	3	1.6445E-01	6.4000E-02	6	2.0585E-02	2.5000E-02
141	1	5.0594E-01	4.1000E-02	4	1.6010E-02	9.1000E-02
	2	1.9537E+00	2.8000E-02	5	4.4314E-03	8.7000E-02
	3	1.6579E-01	6.4000E-02	6	1.9448E-02	2.5000E-02
142	1	4.6266E-01	4.1000E-02	4	1.3887E-02	2.7000E-02
	2	1.6640E+00	2.9000E-02	5	4.3910E-03	8.6000E-02
	3	1.6645E-01	6.4000E-02	6	1.8312E-02	2.5000E-02
143	1	3.9812E-01	9.1000E-02	4	1.3761E-02	2.9000E-02
	2	1.2309E+00	3.0000E-02	5	6.3834E-03	6.6000E-02
	3	1.6715E-01	6.4000E-02	6	1.7174E-02	2.5000E-02
15	1	3.8328E-01	8.3000E-02	4	1.2673E-02	3.1000E-02
	2	1.0721E+00	4.1000E-02	5	6.4154E-03	6.7000E-02
	3	1.6947E-01	6.3000E-02	6	1.6034E-02	2.5000E-02
16	1	4.5278E-01	8.2000E-02	4	1.2723E-02	3.9000E-02
	2	1.1475E+00	9.1000E-02	5	3.9276E-03	6.8000E-02
	3	1.7137E-01	6.3000E-02	6	1.4891E-02	2.5000E-02
17	1	4.5696E-01	6.7000E-02	4	1.0629E-02	5.0000E-02
	2	1.1622E+00	9.1000E-02	5	3.0897E-03	8.9000E-02
	3	1.7261E-01	6.4000E-02	6	1.3747E-02	2.5000E-02
18	1	3.7541E-01	6.7000E-02	4	8.7927E-03	3.7000E-02
	2	9.7629E-01	9.0000E-02	5	3.9508E-03	8.3000E-02
	3	1.7368E-01	6.4000E-02	6	1.2603E-02	2.5000E-02
19	1	2.2854E-01	8.0000E-02	4	1.3543E-02	4.4000E-02
	2	7.8851E-01	1.0600E-01	5	3.7070E-03	6.7000E-02
	3	1.7412E-01	6.3000E-02	6	1.1461E-02	2.5000E-02
191	1	1.8211E-01	8.0000E-02	4	1.3246E-02	7.2000E-02
	2	6.7304E-01	3.9000E-02	5	2.0066E-03	6.8000E-02
	3	1.7461E-01	6.3000E-02	6	1.0896E-02	8.6000E-02
20	1	1.4455E-01	8.0000E-02	4	1.0765E-02	1.0500E-01
	2	6.6067E-01	3.9000E-02	5	1.5002E-03	7.0000E-02
	3	1.7452E-01	6.3000E-02	6	1.1355E-02	5.5000E-02
21	1	1.0212E-01	1.2700E-01	4	1.5072E-02	3.8000E-02
	2	3.5035E-01	4.1000E-02	5	1.7788E-03	7.9000E-02
	3	1.7370E-01	6.3000E-02	6	1.2474E-02	5.5000E-02
22	1	9.7140E-02	1.2800E-01	4	1.5187E-02	3.9000E-02
	2	3.4447E-01	1.1800E-01	5	1.6781E-03	8.0000E-02
	3	1.6660E-01	6.3000E-02	6	1.2800E-02	5.5000E-02
221	1	9.0192E-02	1.3000E-01	4	1.0221E-02	3.9000E-02
	2	5.3996E-01	4.4000E-02	5	1.9719E-03	6.2000E-02

	3	1.3342E-01	6.5000E-02	6	9.1563E-03	1.0300E-01
23	1	9.0185E-02	1.3100E-01	4	4.7700E-03	3.0000E-02
	2	5.4428E-01	7.7000E-02	5	1.4143E-03	8.5000E-02
	3	1.0245E-01	6.6000E-02	6	1.2376E-02	8.3000E-02
231	1	9.8978E-02	9.1400E-01	4	8.6049E-03	5.5000E-02
	2	2.7821E-01	7.7000E-02	5	9.7084E-04	8.5000E-02
	3	8.7947E-02	6.6000E-02	6	1.7547E-02	4.4000E-02
24	1	1.0835E-01	9.1400E-01	4	1.0685E-02	7.7000E-02
	2	3.0218E-01	8.3000E-02	5	7.6072E-04	1.4900E-01
	3	8.0078E-02	8.1000E-02	6	1.9388E-02	4.5000E-02
25	1	1.1737E-01	9.1500E-01	4	7.7584E-03	7.8000E-02
	2	4.5809E-01	4.5000E-02	5	1.6811E-03	1.2000E-01
	3	8.1942E-02	8.0000E-02	6	1.8382E-02	4.5000E-02
251	1	1.2054E-01	9.1500E-01	4	5.7811E-03	8.1000E-02
	2	3.1073E-01	7.7000E-02	5	1.9355E-03	1.2000E-01
	3	1.0154E-01	1.3300E-01	6	1.7276E-02	4.5000E-02
26	1	1.2377E-01	9.1700E-01	4	7.6343E-03	8.2000E-02
	2	2.3531E-01	8.1000E-02	5	1.9058E-03	1.2000E-01
	3	1.2699E-01	1.3300E-01	6	1.5204E-02	4.5000E-02
27	1	1.2269E-01	9.1700E-01	4	9.8803E-03	8.2000E-02
	2	4.3221E-01	8.2000E-02	5	1.9427E-03	2.1100E-01
	3	1.5982E-01	1.3400E-01	6	5.9776E-03	7.7000E-02
271	1	1.1630E-01	9.1600E-01	4	1.0311E-02	8.2000E-02
	2	3.1179E-01	8.2000E-02	5	1.9571E-03	2.1100E-01
	3	1.6981E-01	1.3400E-01	6	2.9418E-03	7.7000E-02
28	1	1.0985E-01	9.1500E-01	4	9.5034E-03	8.2000E-02
	2	1.4465E-01	8.2000E-02	5	1.8111E-03	2.1100E-01
	3	1.7702E-01	1.3500E-01	6	2.1548E-03	9.1400E-01
29	1	7.3695E-02	6.7000E-02	4	2.8659E-03	1.3800E-01
	2	1.3394E-02	4.5000E-02	5	1.2703E-03	2.1100E-01
	3	1.7082E-01	1.3300E-01	6	1.5678E-03	9.1400E-01
291	1	5.8091E-02	6.7000E-02	4	2.5182E-03	1.3300E-01
	2	9.0002E-03	4.5000E-02	5	8.4689E-04	2.1100E-01
	3	1.3718E-01	4.5000E-02	6	1.1791E-03	9.1500E-01
30	1	2.3003E-02	6.7000E-02	4	2.7551E-03	4.5000E-02
	2	4.5215E-03	4.5000E-02	5	4.2345E-04	2.1100E-01
	3	5.9882E-02	4.5000E-02	6	1.1514E-03	6.7000E-02
31	1	3.9304E-09	6.6000E-02	4	3.6013E-09	4.5000E-02
	2	2.0083E-08	4.5000E-02	5	2.3972E-10	2.1100E-01
	3	1.1823E-08	4.5000E-02	6	1.3679E-09	6.7000E-02

S T R E S S C O M P O N E N T M A X I M A

ELEMENT TYPE NUMBER = 1

ELEMENT NUMBER	LOCATION	FORCE COMPONENT	MAXIMUM VALUE	TIME AT MAXIMUM
1		FOR.	2.0760E+03	1.0700E-01
		MOM.	0.0000E+00	0.0000E+00
2		FOR.	1.0596E+03	3.2000E-02
		MOM.	0.0000E+00	0.0000E+00
3		FOR.	3.0566E+03	6.7000E-02
		MOM.	0.0000E+00	0.0000E+00
4		FOR.	0.0000E+00	0.0000E+00
		MOM.	1.6156E+05	5.1000E-02
5		FOR.	0.0000E+00	0.0000E+00
		MOM.	1.0125E+04	7.7000E-02
6		FOR.	0.0000E+00	0.0000E+00
		MOM.	1.3765E+05	1.0700E-01
7		FOR.	1.2608E+03	8.2000E-02
		MOM.	0.0000E+00	0.0000E+00
8		FOR.	8.4760E+02	8.4000E-02
		MOM.	0.0000E+00	0.0000E+00
9		FOR.	5.4126E+02	9.1600E-01
		MOM.	0.0000E+00	0.0000E+00
10		FOR.	4.9025E+02	9.1300E-01
		MOM.	0.0000E+00	0.0000E+00
11		FOR.	2.9197E+02	6.6000E-02
		MOM.	0.0000E+00	0.0000E+00
12		FOR.	0.0000E+00	0.0000E+00
		MOM.	1.7669E+04	9.2100E-01
13		FOR.	0.0000E+00	0.0000E+00
		MOM.	1.0101E+04	9.1700E-01
14		FOR.	0.0000E+00	0.0000E+00
		MOM.	8.3306E+04	9.1500E-01

S T R E S S C O M P O N E N T M A X I M A

ELEMENT TYPE NUMBER = 4

ELEMENT NUMBER	LOCATION	FORCE COMPONENT	MAXIMUM VALUE	TIME AT MAXIMUM
1		FOR.	3.1115E+03	5.1000E-02
		MOM.	0.0000E+00	0.0000E+00

S T R E S S C O M P O N E N T M A X I M A

ELEMENT TYPE NUMBER = 2

ELEMENT NUMBER	LOCATION	FORCE COMPONENT	MAXIMUM VALUE	TIME AT MAXIMUM
1	END-I	FX	1.0596E+03	3.2000E-02
		FY	3.0566E+03	6.7000E-02
		FZ	2.0760E+03	1.0700E-01
		TX	1.0125E+04	7.7000E-02
		MY	1.3765E+05	1.0700E-01
		MZ	1.6156E+05	5.1000E-02
1	END-J	FX	1.0596E+03	3.2000E-02
		FY	3.0566E+03	6.7000E-02
		FZ	2.0760E+03	1.0700E-01
		TX	1.0125E+04	7.7000E-02
		MY	8.8471E+04	1.0700E-01
		MZ	1.0022E+05	5.1000E-02
2	END-I	FX	1.0533E+03	3.2000E-02
		FY	2.9424E+03	6.7000E-02
		FZ	2.0002E+03	1.0700E-01
		TX	1.0125E+04	7.7000E-02
		MY	8.8471E+04	1.0700E-01
		MZ	1.0022E+05	5.1000E-02
2	END-J	FX	1.0533E+03	3.2000E-02
		FY	2.9424E+03	6.7000E-02
		FZ	2.0002E+03	1.0700E-01
		TX	1.0125E+04	7.7000E-02
		MY	4.1085E+04	1.0700E-01
		MZ	4.2779E+04	5.3000E-02
3	END-I	FX	1.0407E+03	3.2000E-02
		FY	2.6093E+03	6.8000E-02
		FZ	1.7510E+03	1.0700E-01
		TX	1.0125E+04	7.7000E-02
		MY	4.1085E+04	1.0700E-01
		MZ	4.2779E+04	5.3000E-02
3	END-J	FX	1.0407E+03	3.2000E-02
		FY	2.6093E+03	6.8000E-02
		FZ	1.7510E+03	1.0700E-01
		TX	1.0125E+04	7.7000E-02
		MY	8.1128E+03	8.0000E-02
		MZ	4.9355E+04	1.7400E-01
*	END-I	FX	1.0201E+03	3.2000E-02
		FY	1.9912E+03	6.8000E-02
		FZ	1.2409E+03	1.0700E-01
		TX	1.0125E+04	7.7000E-02
		MY	8.1128E+03	8.0000E-02
		MZ	4.9355E+04	1.7400E-01

4	END-J	FX	2.0961E+03	6.7000E-02
		FY	1.1719E+03	3.7000E-02
		FZ	1.2409E+03	1.0700E-01
		TX	1.2956E+04	2.2500E-01
		MY	1.9310E+04	1.2300E-01
		MZ	6.5811E+04	6.7000E-02
4	END-J	FX	1.9958E+03	6.8000E-02
		FY	1.0247E+03	3.2000E-02
		FZ	1.2409E+03	1.0700E-01
		TX	2.5246E+04	8.9000E-02
		MY	2.6273E+04	1.2400E-01
		MZ	6.4435E+04	1.7500E-01
5	END-I	FX	1.1734E+03	6.8000E-02
		FY	9.7487E+02	6.7000E-02
		FZ	4.8168E+02	4.9000E-02
		TX	2.5246E+04	8.9000E-02
		MY	2.6273E+04	1.2400E-01
		MZ	6.4435E+04	1.7500E-01
5	END-J	FX	1.1734E+03	6.8000E-02
		FY	9.7487E+02	6.7000E-02
		FZ	4.8168E+02	4.9000E-02
		TX	2.5246E+04	8.9000E-02
		MY	3.8714E+04	1.0700E-01
		MZ	4.9064E+04	3.7000E-02
6	[illegible]	FX	6.3176E+02	1.7300E-01
		FY	7.6989E+02	2.2800E-01
		FZ	4.3734E+02	7.7000E-02
		TX	2.5246E+04	8.9000E-02
		MY	3.8714E+04	1.0700E-01
		MZ	4.9064E+04	3.7000E-02
6	END-J	FX	6.3176E+02	1.7300E-01
		FY	7.6989E+02	2.2800E-01
		FZ	4.3734E+02	7.7000E-02
		TX	2.5246E+04	8.9000E-02
		MY	3.2372E+04	1.0600E-01
		MZ	3.2871E+04	3.7000E-02
7	END-I	FX	1.1083E+03	4.9000E-02
		FY	8.4177E+02	3.7000E-02
		FZ	7.4961E+02	1.2300E-01
		TX	2.5246E+04	8.9000E-02
		MY	3.2372E+04	1.0600E-01
		MZ	3.2871E+04	3.7000E-02
7	END-J	FX	1.1083E+03	4.9000E-02
		FY	8.4177E+02	3.7000E-02
		FZ	7.4961E+02	1.2300E-01
		TX	2.5246E+04	8.9000E-02
		MY	3.6629E+04	4.7000E-02

		MZ	9.8999E+03	6.8000E-01
8	END-I	FX	1.9407E+03	5.0000E-02
		FY	8.0609E+02	1.2300E-01
		FZ	6.4935E+02	3.8000E-02
		TX	2.5246E+04	8.9000E-02
		MY	9.8788E+03	6.8000E-01
		MZ	3.6628E+04	4.7000E-02
8	END-J	FX	1.4187E+03	4.8000E-02
		FY	1.4489E+03	5.2000E-02
		FZ	6.4935E+02	3.8000E-02
		TX	1.7610E+04	1.0700E-01
		MY	2.3212E+04	2.2700E-01
		MZ	3.1455E+04	4.6000E-02
8	END-J	FX	8.0608E+02	1.2300E-01
		FY	1.9407E+03	5.0000E-02
		FZ	6.4935E+02	3.8000E-02
		TX	1.4287E+04	6.8500E-01
		MY	2.9561E+04	8.9000E-02
		MZ	2.8949E+04	1.5700E-01
9	END-I	FX	7.3286E+02	7.4000E-02
		FY	3.8760E+02	1.0700E-01
		FZ	6.7026E+02	4.0000E-02
		TX	1.4287E+04	6.8500E-01
		MY	2.9007E+04	1.5700E-01
		MZ	2.9442E+04	8.9000E-02
9	END-J	FX	7.3286E+02	7.4000E-02
		FY	3.8760E+02	1.0700E-01
		FZ	6.7026E+02	4.0000E-02
		TX	1.4287E+04	6.8500E-01
		MY	2.7235E+04	1.0700E-01
		MZ	2.7587E+04	1.7200E-01
10	END-I	FX	6.6031E+02	7.4000E-02
		FY	5.4079E+02	1.0700E-01
		FZ	4.8144E+02	4.5000E-02
		TX	1.4287E+04	6.8500E-01
		MY	2.7235E+04	1.0700E-01
		MZ	2.7587E+04	1.7200E-01
10	END-J	FX	6.6031E+02	7.4000E-02
		FY	5.4079E+02	1.0700E-01
		FZ	4.8144E+02	4.5000E-02
		TX	1.4287E+04	6.8500E-01
		MY	3.1594E+04	1.0600E-01
		MZ	2.5282E+04	1.7300E-01
11	END-I	FX	5.8661E+02	7.4000E-02
		FY	5.0979E+02	5.4000E-02

		FZ	5.6022E+02	6.5000E-02
		TX	1.4287E+04	6.8500E-01
		MY	3.1594E+04	1.0600E-01
		MZ	2.5282E+04	1.7300E-01
11	END-J	FX	5.8661E+02	7.4000E-02
		FY	5.0979E+02	5.4000E-02
		FZ	5.6022E+02	6.5000E-02
		TX	1.4287E+04	6.8500E-01
		MY	3.0596E+04	6.7000E-02
		MZ	2.5076E+04	7.8000E-02
12	END-I	FX	5.1188E+02	7.4000E-02
		FY	5.4467E+02	8.6000E-02
		FZ	5.2350E+02	5.1000E-02
		TX	1.4287E+04	6.8500E-01
		MY	3.0596E+04	6.7000E-02
		MZ	2.5076E+04	7.8000E-02
12	END-J	FX	5.1188E+02	7.4000E-02
		FY	5.4467E+02	8.6000E-02
		FZ	5.2350E+02	5.1000E-02
		TX	1.4287E+04	6.8500E-01
		MY	4.4165E+04	6.6000E-02
		MZ	3.4529E+04	2.4400E-01
13	END-I	FX	4.5594E+02	5.8000E-02
		FY	4.3890E+02	1.7300E-01
		FZ	3 7385E+02	1.0500E-01
		TX	1.4287E+04	6.8500E-01
		MY	4.4165E+04	6.6000E-02
		MZ	3.4529E+04	2.4400E-01
13	END-J	FX	4.5594E+02	5.8000E-02
		FY	4.3890E+02	1.7300E-01
		FZ	3.7385E+02	1.0500E-01
		TX	1.4287E+04	6.8500E-01
		MY	4.7285E+04	6.6000E-02
		MZ	4.1496E+04	2.4500E-01
14	END-I	FX	4.3610E+02	5.8000E-02
		FY	3.7334E+02	7.8000E-02
		FZ	3.8450E+02	1.0500E-01
		TX	1.4287E+04	6.8500E-01
		MY	4.7285E+04	6.6000E-02
		MZ	4.1496E+04	2.4500E-01
14	END-J	FX	4.3610E+02	5.8000E-02
		FY	3.7334E+02	7.8000E-02
		FZ	3.8450E+02	1.0500E-01
		TX	1.4287E+04	6.8500E-01
		MY	3.8278E+04	5.1000E-02
		MZ	3.8411E+04	8.5000E-02

15	END-I	FX	4.1536E+02	5.8000E-02
		FY	4.1088E+02	2.4500E-01
		FZ	7.0961E+02	6.5000E-02
		TX	1.4287E+04	6.8500E-01
		MY	3.8278E+04	5.1000E-02
		MZ	3.8411E+04	8.5000E-02
15	END-J	FX	4.1536E+02	5.8000E-02
		FY	4.1088E+02	2.4500E-01
		FZ	7.0961E+02	6.5000E-02
		TX	1.4287E+04	6.8500E-01
		MY	2.2649E+04	5.3000E-02
		MZ	2.7955E+04	8.5000E-02
16	END-I	FX	3.9373E+02	5.8000E-02
		FY	5.6922E+02	8.5000E-02
		FZ	9.3120E+02	6.5000E-02
		TX	1.4287E+04	6.8500E-01
		MY	2.2649E+04	5.3000E-02
		MZ	2.7955E+04	8.5000E-02
16	END-J	FX	3.9373E+02	5.8000E-02
		FY	5.6922E+02	8.5000E-02
		FZ	9.3120E+02	6.5000E-02
		TX	1.4287E+04	6.8500E-01
		MY	2.0225E+04	6.2000E-02
		MZ	1.3005E+04	9.1600E-01
17	END-I	FX	3.7304E+02	5.8000E-02
		FY	9.2673E+02	6.5000E-02
		FZ	4.9783E+02	1.0100E-01
		TX	1.4287E+04	6.8500E-01
		MY	1.2970E+04	9.1600E-01
		MZ	2.0200E+04	6.2000E-02
17	END-J	FX	7.6915E+02	6.3000E-02
		FY	6.0457E+02	5.2000E-02
		FZ	4.9783E+02	1.0100E-01
		TX	6.2278E+03	7.6600E-01
		MY	1.6238E+04	6.8200E-01
		MZ	3.0608E+04	6.4000E-02
17	END-J	FX	9.2674E+02	6.5000E-02
		FY	3.7303E+02	5.8000E-02
		FZ	4.9783E+02	1.0100E-01
		TX	1.2037E+04	9.1700E-01
		MY	1.5715E+04	6.8600E-01
		MZ	3.3752E+04	6.5000E-02
18	END-I	FX	8.7579E+02	6.5000E-02
		FY	4.0384E+02	1.3800E-01
		FZ	3.5386E+02	5.9000E-02
		TX	1.2146E+04	9.1700E-01
		MY	3.3786E+04	6.5000E-02
		MZ	1.5725E+04	6.8600E-01

18	END-J	FX	8.7579E+02	6.5000E-02
		FY	4.0384E+02	1.3800E-01
		FZ	3.5386E+02	5.9000E-02
		TX	1.2146E+04	9.1700E-01
		MY	3.2750E+04	6.5000E-02
		MZ	1.5948E+04	6.8600E-01
19	END-I	FX	8.0874E+02	6.5000E-02
		FY	4.3912E+02	9.1000E-02
		FZ	3.9214E+02	8.7000E-02
		TX	1.2043E+04	9.1700E-01
		MY	3.2699E+04	6.5000E-02
		MZ	1.5948E+04	6.8600E-01
19	END-J	FX	8.0874E+02	6.5000E-02
		FY	4.3912E+02	9.1000E-02
		FZ	3.9214E+02	8.7000E-02
		TX	1.2043E+04	9.1700E-01
		MY	2.6398E+04	6.7000E-02
		MZ	2.1369E+04	1.0200E-01
20	END-I	FX	7.0179E+02	6.5000E-02
		FY	2.7322E+02	9.0000E-02
		FZ	4.1660E+02	8.5000E-02
		TX	1.2043E+04	9.1700E-01
		MY	2.6398E+04	6.7000E-02
		MZ	2.1369E+04	1.0200E-01
20	END-J	FX	7.0179E+02	6.5000E-02
		FY	2.7322E+02	9.0000E-02
		FZ	4.1660E+02	8.5000E-02
		TX	1.2043E+04	9.1700E-01
		MY	1.6566E+04	6.8000E-02
		MZ	2.9123E+04	1.0700E-01
21	END-I	FX	6.0079E+02	5.1000E-02
		FY	3.7463E+02	6.6000E-02
		FZ	4.2476E+02	6.6000E-02
		TX	1.2043E+04	9.1700E-01
		MY	1.6566E+04	6.8000E-02
		MZ	2.9123E+04	1.0700E-01
21	END-J	FX	6.0079E+02	5.1000E-02
		FY	3.7463E+02	6.6000E-02
		FZ	4.2476E+02	6.6000E-02
		TX	1.2043E+04	9.1700E-01
		MY	1.7911E+04	8.7000E-02
		MZ	2.8411E+04	1.0700E-01
22	END-I	FX	5.4036E+02	5.1000E-02
		FY	4.1961E+02	1.2400E-01
		FZ	4.0648E+02	6.7000E-02
		TX	1.2043E+04	9.1700E-01

		MY	1.7911E+04	8.7000E-02
		MZ	2.8411E+04	1.0700E-01
22	END-J	FX	5.4036E+02	5.1000E-02
		FY	4.1961E+02	1.2400E-01
		FZ	4.0648E+02	6.7000E-02
		TX	1.2043E+04	9.1700E-01
		MY	2.3778E+04	8.5000E-02
		MZ	1.7926E+04	6.6000E-02
23	END-I	FX	4.8459E+02	5.2000E-02
		FY	5.1912E+02	1.0700E-01
		FZ	2.5821E+02	6.8000E-02
		TX	1.2043E+04	9.1700E-01
		MY	2.3778E+04	8.5000E-02
		MZ	1.7926E+04	6.6000E-02
23	END-J	FX	4.8459E+02	5.2000E-02
		FY	5.1912E+02	1.0700E-01
		FZ	2.5821E+02	6.8000E-02
		TX	1.2043E+04	9.1700E-01
		MY	2.4443E+04	8.3000E-02
		MZ	2.1843E+04	1.2400E-01
24	END-I	FX	4.3035E+02	5.2000E-02
		FY	5.2619E+02	1.0600E-01
		FZ	2.8093E+02	8.7000E-02
		TX	1.2044E+04	9.1700E-01
		MY	2.4443E+04	8.3000E-02
		MZ	2.1843E+04	1.2400E-01
24	END-J	FX	4.3035E+02	5.2000E-02
		FY	5.2619E+02	1.0600E-01
		FZ	2.8093E+02	8.7000E-02
		TX	1.2044E+04	9.1700E-01
		MY	1.9677E+04	6.7000E-02
		MZ	2.9587E+04	1.2400E-01
25	END-I	FX	3.8098E+02	5.3000E-02
		FY	3.2556E+02	1.0600E-01
		FZ	5.1074E+02	8.3000E-02
		TX	1.2043E+04	9.1700E-01
		MY	1.9677E+04	6.7000E-02
		MZ	2.9587E+04	1.2400E-01
25	END-J	FX	3.8098E+02	5.3000E-02
		FY	3.2556E+02	1.0600E-01
		FZ	5.1074E+02	8.3000E-02
		TX	1.2043E+04	9.1700E-01
		MY	1.2243E+04	9.1500E-01
		MZ	3.0062E+04	1.0600E-01
26	END-I	FX	3.3823E+02	5.4000E-02
		FY	3.2880E+02	3.8000E-02

		FZ	7.1961E+02	8.2000E-02
		TX	1.2043E+04	9.1700E-01
		MY	1.2243E+04	9.1500E-01
		MZ	3.0062E+04	1.0600E-01
26	END-J	FX	3.3823E+02	5.4000E-02
		FY	3.2880E+02	3.8000E-02
		FZ	7.1961E+02	8.2000E-02
		TX	1.2043E+04	9.1700E-01
		MY	2.5853E+04	8.3000E-02
		MZ	3.0142E+04	1.0600E-01
27	END-I	FX	3.5477E+02	8.8000E-02
		FY	4.3384E+02	7.2000E-02
		FZ	4.1073E+02	8.2000E-02
		TX	1.2038E+04	9.1700E-01
		MY	2.5854E+04	8.3000E-02
		MZ	3.0142E+04	1.0600E-01
27	END-J	FX	3.5477E+02	8.8000E-02
		FY	4.3384E+02	7.2000E-02
		FZ	4.1073E+02	8.2000E-02
		TX	1.2038E+04	9.1700E-01
		MY	1.2717E+04	8.4000E-02
		MZ	2.4621E+04	1.5500E-01
28	END-I	FX	4.3593E+02	8.7000E-02
		FY	4.4751E+02	1.0500E-01
		FZ	3.3287E+02	8.4000E-02
		TX	1.2038E+04	9.1700E-01
		MY	1.2717E+04	8.4000E-02
		MZ	2.4621E+04	1.5500E-01
28	END-J	FX	4.3593E+02	8.7000E-02
		FY	4.4751E+02	1.0500E-01
		FZ	3.3287E+02	8.4000E-02
		TX	1.2038E+04	9.1700E-01
		MY	8.6491E+03	9.1600E-01
		MZ	2.1970E+04	7.4500E-01
29	END-I	FX	5.2404E+02	8.6000E-02
		FY	4.4635E+02	7.7000E-02
		FZ	2.8574E+02	8.5000E-02
		TX	1.2038E+04	9.1700E-01
		MY	8.6491E+03	9.1600E-01
		MZ	2.1970E+04	7.4500E-01
29	END-J	FX	5.2404E+02	8.6000E-02
		FY	4.4635E+02	7.7000E-02
		FZ	2.8574E+02	8.5000E-02
		TX	1.2038E+04	9.1700E-01
		MY	9.3483E+03	6.1000E-02
		MZ	1.8741E+04	7.4800E-01

30	END-I	FX	5.8772E+02	8.6000E-02
		FY	2.4349E+02	8.5000E-02
		FZ	4.4653E+02	7.7000E-02
		TX	1.2038E+04	9.1700E-01
		MY	1.8736E+04	7.4800E-01
		MZ	9.3451E+03	6.1000E-02
30	END-J	FX	6.3567E+02	8.6000E-02
		FY	1.5738E+02	9.1500E-01
		FZ	4.4653E+02	7.7000E-02
		TX	9.5080E+03	9.1300E-01
		MY	1.9459E+04	7.4600E-01
		MZ	9.6139E+03	6.1000E-02
30	END-J	FX	5.8684E+02	8.6000E-02
		FY	2.5887E+02	9.1600E-01
		FZ	4.4653E+02	7.7000E-02
		TX	9.5932E+03	2.6200E-01
		MY	1.7387E+04	7.4500E-01
		MZ	8.6781E+03	6.1000E-02
31	END-I	FX	6.0149E+02	8.5000E-02
		FY	3.5329E+02	7.7000E-02
		FZ	3.1263E+02	8.5000E-02
		TX	9.5931E+03	2.6200E-01
		MY	8.6654E+03	6.1000E-02
		MZ	1.7383E+04	7.4500E-01
31	END-J	FX	6.0149E+02	8.5000E-02
		FY	3.5329E+02	7.7000E-02
		FZ	3.1263E+02	8.5000E-02
		TX	9.5931E+03	2.6200E-01
		MY	3.7059E+03	1.2200E-01
		MZ	1.8118E+04	9.4000E-02
32	END-I	FX	6.2179E+02	8.5000E-02
		FY	2.3554E+02	1.4300E-01
		FZ	3.9004E+02	8.5000E-02
		TX	9.5931E+03	2.6200E-01
		MY	3.7059E+03	1.2200E-01
		MZ	1.8118E+04	9.4000E-02
32	END-J	FX	6.2179E+02	8.5000E-02
		FY	2.3554E+02	1.4300E-01
		FZ	3.9004E+02	8.5000E-02
		TX	9.5931E+03	2.6200E-01
		MY	1.2784E+04	8.4000E-02
		MZ	1.7240E+04	7.7000E-02
33	END-I	FX	2.4070E+02	1.3400E-01
		FY	3.0228E+02	1.3900E-01
		FZ	2.1281E+02	1.5600E-01
		TX	9.5932E+03	2.6200E-01
		MY	1.2785E+04	8.4000E-02
		MZ	1.7240E+04	7.7000E-02

33	END-J	FX	2.4070E+02	1.3400E-01
		FY	3.0228E+02	1.3900E-01
		FZ	2.1281E+02	1.5600E-01
		TX	9.5932E+03	2.6200E-01
		MY	9.5959E+03	9.1400E-01
		MZ	1.1582E+04	7.7000E-02
34	END-I	FX	2.4394E+02	1.3400E-01
		FY	3.6633E+02	7.7000E-02
		FZ	1.9040E+02	1.5500E-01
		TX	9.5930E+03	2.6200E-01
		MY	9.5962E+03	9.1400E-01
		MZ	1.1582E+04	7.7000E-02
34	END-J	FX	2.4394E+02	1.3400E-01
		FY	3.6633E+02	7.7000E-02
		FZ	1.9040E+02	1.5500E-01
		TX	9.5930E+03	2.6200E-01
		MY	8.8445E+03	9.1300E-01
		MZ	9.1972E+03	1.4100E-01
35	END-I	FX	2.4730E+02	1.3400E-01
		FY	1.6204E+02	1.5500E-01
		FZ	3.1751E+02	9.3000E-02
		TX	9.5931E+03	2.6200E-01
		MY	9.2302E+03	1.4100E-01
		MZ	8.8516E+03	9.1300E-01
35	END-J	FX	2.2762E+02	1.3400E-01
		FY	1.7413E+02	9.1500E-01
		FZ	3.1751E+02	9.3000E-02
		TX	1.3682E+04	2.2800E-01
		MY	5.6718E+03	8.9000E-02
		MZ	7.7893E+03	1.3600E-01
35	END-J	FX	1.6204E+02	1.5500E-01
		FY	2.4730E+02	1.3400E-01
		FZ	3.1751E+02	9.3000E-02
		TX	1.2731E+04	2.2900E-01
		MY	7.2513E+03	8.8000E-02
		MZ	5.5594E+03	1.5800E-01
36	END-I	FX	1.3861E+02	1.5500E-01
		FY	2.7036E+02	7.6000E-01
		FZ	2.4195E+02	1.3400E-01
		TX	1.2731E+04	2.2900E-01
		MY	5.5618E+03	1.5800E-01
		MZ	7.2394E+03	8.8000E-02
36	END-J	FX	1.3861E+02	1.5500E-01
		FY	2.7036E+02	7.6000E-01
		FZ	2.4195E+02	1.3400E-01
		TX	1.2731E+04	2.2900E-01

		MY	3.3451E+03	2.1200E-01
		MZ	5.7502E+03	5.5000E-02
37	END-I	FX	1.6034E+02	7.9500E-01
		FY	3.3007E+02	8.4300E-01
		FZ	2.3151E+02	9.1400E-01
		TX	1.2731E+04	2.2900E-01
		MY	3.3451E+03	2.1200E-01
		MZ	5.7502E+03	5.5000E-02
37	END-J	FX	1.6034E+02	7.9500E-01
		FY	3.3007E+02	8.4300E-01
		FZ	2.3151E+02	9.1400E-01
		TX	1.2731E+04	2.2900E-01
		MY	5.2085E+03	7.9500E-01
		MZ	8.4992E+03	7.6600E-01
38	END-I	FX	1.9957E+02	9.8000E-01
		FY	2.6578E+02	9.1400E-01
		FZ	4.0464E+02	9.1200E-01
		TX	1.2731E+04	2.2900E-01
		MY	8.4946E+03	7.6600E-01
		MZ	5.1988E+03	7.9500E-01
38	END-J	FX	3.2741E+02	9.1500E-01
		FY	1.1259E+02	1.5700E-01
		FZ	4.0464E+02	9.1200E-01
		TX	1.5297E+04	7.5900E-01
		MY	8.3158E+03	1.4000E-01
		MZ	7.1871E+03	7.9400E-01
38	END-J	FX	2.6579E+02	9.1400E-01
		FY	1.9956E+02	9.8000E-01
		FZ	4.0464E+02	9.1200E-01
		TX	1.4900E+04	9.1200E-01
		MY	1.0929E+04	1.3900E-01
		MZ	7.0400E+03	1.3300E-01
39	END-I	FX	3.0459E+02	9.1500E-01
		FY	4.5239E+02	9.1200E-01
		FZ	2.4031E+02	9.1600E-01
		TX	1.4900E+04	9.1200E-01
		MY	7.0243E+03	1.3300E-01
		MZ	1.0957E+04	1.3900E-01
39	END-J	FX	3.0459E+02	9.1500E-01
		FY	4.5239E+02	9.1200E-01
		FZ	2.4031E+02	9.1600E-01
		TX	1.4900E+04	9.1200E-01
		MY	4.9385E+03	1.3400E-01
		MZ	1.2668E+04	8.5300E-01
40	END-I	FX	3.3678E+02	9.1600E-01

		FY	4.7808E+02	9.1300E-01
		FZ	2.7008E+02	9.1600E-01
		TX	1.4900E+04	9.1200E-01
		MY	4.9387E+03	1.3400E-01
		MZ	1.2668E+04	8.5300E-01
40	END-J	FX	3.3678E+02	9.1600E-01
		FY	4.7808E+02	9.1300E-01
		FZ	2.7008E+02	9.1600E-01
		TX	1.4900E+04	9.1200E-01
		MY	4.8317E+03	9.2000E-01
		MZ	2.1934E+04	9.1500E-01
41	END-I	FX	3.7619E+02	9.1600E-01
		FY	4.9197E+02	9.1300E-01
		FZ	3.0253E+02	9.1500E-01
		TX	1.4900E+04	9.1200E-01
		MY	4.8308E+03	9.2000E-01
		MZ	2.1934E+04	9.1500E-01
41	END-J	FX	3.7497E+02	6.6000E-02
		FY	6.1240E+02	9.1500E-01
		FZ	3.0253E+02	9.1500E-01
		TX	9.3158E+03	7.6000E-01
		MY	1.7625E+04	9.1400E-01
		MZ	3.0130E+04	9.1400E-01
41	END-J	FX	4.9005E+02	9.1300E-01
		FY	3.7872E+02	9.1600E-01
		FZ	3.0253E+02	9.1500E-01
		TX	1.0100E+04	9.1700E-01
		MY	2.0331E+04	9.1300E-01
		MZ	3.7483E+04	9.1500E-01
42	END-I	FX	4.9016E+02	9.1300E-01
		FY	2.1139E+02	1.3300E-01
		FZ	5.1888E+02	9.1600E-01
		TX	1.0101E+04	9.1700E-01
		MY	4.0853E+04	9.1400E-01
		MZ	1.2323E+04	9.7800E-01
42	END-J	FX	4.9016E+02	9.1300E-01
		FY	2.1139E+02	1.3300E-01
		FZ	5.1888E+02	9.1600E-01
		TX	1.0101E+04	9.1700E-01
		MY	5.4623E+04	9.1400E-01
		MZ	1.3906E+04	9.1900E-01
43	END-I	FX	4.9022E+02	9.1300E-01
		FY	2.6776E+02	1.3300E-01
		FZ	5.3646E+02	9.1600E-01
		TX	1.0101E+04	9.1700E-01
		MY	5.4623E+04	9.1400E-01
		MZ	1.3906E+04	9.1900E-01

43	END-J	FX	4.9022E+02	9.1300E-01
		FY	2.6776E+02	1.3300E-01
		FZ	5.3646E+02	9.1600E-01
		TX	1.0101E+04	9.1700E-01
		MY	6.8900E+04	9.1500E-01
		MZ	1.5746E+04	9.2000E-01
44	END-I	FX	4.9025E+02	9.1300E-01
		FY	2.9197E+02	6.6000E-02
		FZ	5.4126E+02	9.1600E-01
		TX	1.0101E+04	9.1700E-01
		MY	6.8900E+04	9.1500E-01
		MZ	1.5746E+04	9.2000E-01
44	END-J	FX	4.9025E+02	9.1300E-01
		FY	2.9197E+02	6.6000E-02
		FZ	5.4126E+02	9.1600E-01
		TX	1.0101E+04	9.1700E-01
		MY	8.3306E+04	9.1500E-01
		MZ	1.7669E+04	9.2100E-01

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11. ABSTRACT *(200 words or less)*

To satisfy the need for verification of the computer programs and modeling techniques that will be used to perform the final piping analysis for the ABB/Combustion Engineering System 80+ Standardized Plant, three benchmark problems were developed. The problems are representative piping systems subjected to representative dynamic loads with solutions developed using the methods being proposed for analysis for the System 80+ standard design. It will be required that the combined license licensees demonstrate that their solutions to these problems are in agreement with the benchmark problem set.

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