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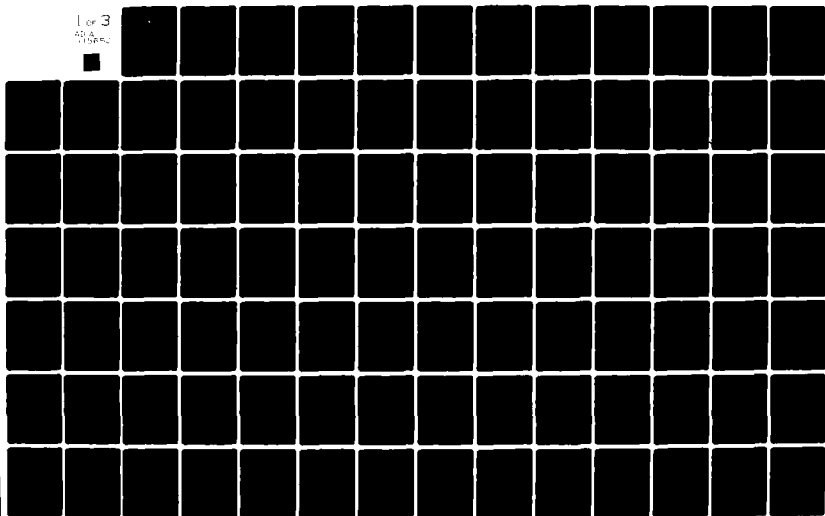
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ANALYSIS OF COVARIANCE COMPUTER PROGRAM WITH MULTIPLE COVARIATE--ETC(U)
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ANALYSIS OF COVARIANCE COMPUTER PROGRAM WITH MULTIPLE
COVARIATES AND FORECAST CAPABILITY

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30 APRIL 1982

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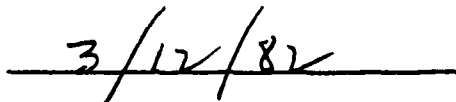
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SUMMARY

This report documents the modifications to a U.C.L.A. Biomedical Mathematics Department (BMD) Analysis-of-Covariance Statistical Computer Program. The computer code was revised by the NAVAIRDEVCON to increase the computational accuracy and formulate output solutions in a form more suitable to the solution of engineering type problems.

The Covariance Statistical Model was used to successfully formulate empirical correlation equations which relate vehicle aftend drag with the complicated external flow field, the propulsion system, and the aircraft design parameters.

The program and supporting subroutines are written in FORTRAN for use on a CDC 6600 Computer. The appendices of this report include a sample problem input/output listing, computer program listing, a program user's guide, and the Analysis-of-Covariance statistical model.

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INTRODUCTION

Modifications to a U.C.L.A. Biomedical Mathematics Department Analysis-of-Covariance (BMD04V) Statistical Computer Program (reference (a)) were developed by NAVAIRDEVCEEN to successfully formulate empirical correlation equations which relate aircraft aftend drag with external flow field parameters and aircraft design parameters. The modifications to the computer code were developed during a NAVAIR sponsored Aft Fuselage Twin Nozzle Fighter-Type Aircraft Drag Project. The project involved the correlation of a large data base of aircraft fuselage drag measurements obtained from various wind tunnel fighter models which contained geometric and flight performance variations.

This report will describe the unique capabilities of the Covariance Analyses and the extensive improvements to the original computer code which make it a valuable tool for use in analyzing a variety of engineering problems.

METHODOLOGY

In general, the Analysis-of-Covariance statistical model can be applied to any engineering problem for which a data base of dependent and independent variables exists and for which a requirement exists to relate the variables through a set of empirical correlation equations. The Analysis-of-Covariance method is not a traditional multiple regression method although it can be degraded to provide all the output normally associated with a total regression. The Analysis-of-Covariance method permits the separation of covariate (independent variables) to allow correlation of the variate (dependent variable) with a single covariate. For example, the method can be used to independently synthesize the functional relationships between each and every independent variable and the related multidependent functional variable. A multiple regression method cannot filter out the multiple effects on a dependent variable which are contributed by several related independent variables. A multiple regression method can be used when only one independent variable exists or when the interdependence of the independent variables is known a priori.

A complete and detailed mathematical formulation of the Analysis-of-Covariance model can be found in any standard statistical text (i.e., references (b) and (c)). For the sake of completeness, a description of the computational procedure is provided in Appendix D.

DISCUSSIONPROGRAM DESCRIPTION

The computer program described in this report can be utilized to compute Analysis-of-Covariance information for one Analysis-of-Variance variable with multiple covariates and unequal treatment group sizes with forecast capability. The statistical method permits the user to designate treatment groups or subdivisions of case input data which demonstrate certain user defined levels consistent with the reduction of scatter of the variate or dependent variable. In addition, covariate parameters may be defined which are common to each treatment group and which reduce the scatter of the variate in each group. The proper covariate parameters for a given problem are those which filter out the common effects and increase the predominant dependence within the treatment groups. The provision for the subdivision of case data into treatment groups provides the Covariance Analysis with the unique capability to synthesize the functional relationship of each independent variable on the dependent variable. The program provides the capability of partitioning the case data into treatment groups through user defined boolean expressions, thus simplifying the subdivision of large input data problems.

The program also provides the capability of transformation of the covariate parameters into complex multivariable functions which may be instrumental in the reduction of the variance of the dependent variable. The term transgeneration is used to include transformations of input variables and creation of new variables prior to the computations performed by the program. By use of the transgeneration option, new variables may be created by performing algebraic, trigonometric, exponential, and logarithmic transformations on the original variables. These variables may either replace the old variables or they may be entirely new variables. For example, suppose that there are two original variables, variable 1 and variable 2. Then a third variable, variable 3, could be created by letting variable 3 be the square root of variable 2.

The program provides output of cross correlation matrices through which an indication can be formed of the independence of each of the covariate parameters. The capability of analyzing the cross correlation between covariate parameters permits the user to select covariates with the least interdependence and thus increase the accuracy of the statistical model. For example, if two covariates are highly correlated, the increased probability exists that either the covariates should be combined or one of the covariates should be removed from the analysis. The cross correlation matrices thus provide a means of filtering candidate covariates for inclusion in the Covariance Analysis.

The Analysis-of-Covariance program provides tables of covariance coefficients, standard errors, computed T-values, and confidence levels. A unique mathematical routine within the program structure calculates the confidence levels for each covariate based on the calculated T-values

and degrees of freedom. This eliminates the need for use of detailed statistical tables which is common for all other statistical methods. The confidence levels permit the user to evaluate the relative merit of each covariate parameter in reducing the total variation and thus assist in synthesizing the unique empirical correlation parameters.

Another unique feature provides output of tables of residual analysis which contain for each case: the variate, the estimated variate based on the covariate analysis, the residual and the percent variation in each treatment group. The residual tables are typically plotted, using any standard existing interactive computer technique, to obtain the scatter of data in each treatment group about the mean of the variates. The graphic residual variation provides a definitive representation of the precision attained in the selection of covariates and the trend of any errors in the analysis.

The program also provides the capability of introducing forecast data into the previously defined statistical model in order to test the precision accuracy. This procedure is highly desirable with any statistical analysis, for the introduction of data which is independent of the data utilized to develop the model equations will provide a definitive evaluation of the previous analysis.

A sample input data problem which demonstrates most of the computer program options is included in Appendix A together with the resultant output formulation. A complete listing of the main computer program and the associated subroutine subprograms is presented in Appendix B. A program user's guide (see Appendix C) provides a detailed description of the available program options and defines the sequence and function of each of the program control directives.

PROGRAM STRUCTURE

The Analysis-of-Covariance Computer Code consists of a main program and eight subroutines written in Fortran language and compatible with the NAVAIRDEVCON CDC 6600 series computer systems. The computer code listing comprising the Covariance Analysis is included with this report in Appendix B.

Program BMD04V

The main program reads the program control cards, reads the input data cards, checks the problem limitations, calculates and prints some of the output values, and controls the calls to the subroutine subprograms.

Subroutine MINV

The subroutine MINV is utilized by the main program to invert the cross-product data matrices associated with the least-square solution of

the Total, Treatment, and Error formulations of the statistical models using the standard Gauss-Jordan method.

Subroutine GRPSEL

The subroutine GRPSEL assigns group designations to each input data case consistent with user defined boolean selection criteria. If the optional boolean selection feature is being used to place cases in their treatment groups, group definition cards are prepared as shown in the user's guide of Appendix C. A diagnostic message is printed for illegal user defined operations.

Subroutine PATTY2

Subroutine PATTY2 prints the data matrices associated with the correlations, cross-products, and inverse of the cross-products for the Total, Treatment, and Error analyses. The routine also prints a diagnostic message for singular inverse cross-product matrices.

Subroutine TG41

Subroutine TG41 performs the various user defined transgenerations of input data. By use of the Transgeneration Cards (see User's Guide, Appendix C), new variables may be created by performing algebraic, trigonometric, exponential, and logarithmic transformations on the original variables. The transgeneration codes permit the formulation of any user defined multiple-variable functional relationship. The routine also prints diagnostic messages for violations of transgeneration code restrictions.

Subroutine TPWD

This subroutine assigns user specified BCD tape number designations to the main program for exchange and storage of case input data. A diagnostic message is printed for illegal user tape number designations.

Subroutine WRT

The subroutine WRT prints most of the output tables and computational results developed by the main program and the other subroutines.

Subroutine CONF

The subroutine CONF computes the confidence level associated with each input T-value for the corresponding degrees-of-freedom. The routine eliminates the need for detailed statistical tables by providing a rapid calculation of the Student's T-value at the appropriate confidence level for each covariate parameter.

Subroutine LDAY

The subroutine LDAY calculates and prints the current run-time day, month, and year at the top of each page of output.

PROGRAM MODIFICATIONS

A standard Analysis-of-Covariance computer program with multiple covariates has been modified to include data forecast capability, covariate correlation and residual analyses for Total, Treatment, and Error groups. The resulting statistical method represents a more sophisticated analytical tool with increased computational accuracy.

Major modifications to the original computer program were effected in the following categories:

Input/Output Enhancements

1. Input control cards printed in output.
2. Input Data cards printed in output with case and group numbers.
3. Output values printed in scientific notation.
4. Added assigned group number table for null contingency.
5. Added output paging to report style.
6. Added transgenerated data output.

Computational Enhancements

1. Added more efficient matrix inversion method.
2. Added singular matrix definition and diagnostic message.
3. Added covariate correlation matrices.
4. Added forecast data capability.
5. Added estimates of standard deviation.
6. Added confidence levels for computed T-values.
7. Added residual analyses.

8. Added maximum residual analyses.
9. Added table of intercepts.
10. Added table of overall covariate means.
11. Added table of sum-squares within.
12. Removed restrictions on covariate storage.

CONCLUSIONS

The Analysis-of-Covariance statistical method can be applied to any engineering problem for which a data base of dependent and independent variables exists and for which a requirement exists to relate the variables through a set of empirical correlation equations.

The Covariance statistical method has been used with success, for the past 7 years, at the NAVAIRDEVGEN to formulate empirical correlation equations for a wide variety of engineering problems. The statistical method has more capability than the traditional multiple regression procedure and is recommended whenever a correlation is required of qualitative and quantitative parameters.

R E F E R E N C E S

- (a) Dixon, W. J., "(BMD) Biomedical Computer Programs," University of California Press, Los Angeles, 1973.
- (b) Bennett, Carl A., and Franklin, Norman L., "Statistical Analysis In Chemistry and the Chemical Industry," Wiley, 1954.
- (c) Scheffe', Henry, "The Analysis of Variance," Wiley, 1959.

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A P P E N D I X A

ANALYSIS OF COVARIANCE COMPUTER PROGRAM
SAMPLE INPUT/OUTPUT LISTING

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DESCRIPTION

The sample case presented in this section is representative of the engineering problems that can be analyzed using the Analysis-of-Covariance statistical method. The example represents a typical aircraft optimum Mach number climb characteristic (dependent variate parameter) in terms of altitude, weight, drag, and ambient temperature (independent covariate parameters). The covariate parameters are related to the variate through partitioning using the treatment groups designators and transgenerated in terms of the multifunctional covariates. This example illustrates the utility of the Covariance Analysis to detect and synthesize the functional relationships between independent and dependent variables.

The input cards for the sample case are presented on pages A-6 through A-13. The first page shows the sample Problem card, the Trans-generation cards, the Group Definition cards, the Label card, the Format card, and the beginning of the variate and covariate parameters. The full list of input variables is continued through page A-13 where the input is terminated with the Covariate Selection card and the finish card.

The output solution for the sample case is presented on pages A-14 through A-128. The output includes the following information: the group means, the correlation matrices, the error analyses, the covariate coefficients, the residual analyses, and the standard deviations. The Analysis-of-Covariance table (page A-59) presents the overall accuracy of the correlations for both the Total and Within analyses. The square root of the mean-square values, which are presented in the table, provides the standard error of the statistical models.

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.3838	25000.000	30000.000	100.000	0.000
.4138	30000.000	30000.000	100.000	0.000
.4205	31000.000	30000.000	100.000	0.000
.4271	32000.000	30000.000	100.000	0.000
.4338	33000.000	30000.000	100.000	0.000
.4410	34000.000	30000.000	100.000	0.000
.4488	35000.000	30000.000	100.000	0.000
.2847	190.476	100000.000	100.000	0.000
.3052	5000.000	100000.000	100.000	0.000
.3229	10000.000	100000.000	100.000	0.000
.3432	15000.000	100000.000	100.000	0.000
.3670	20000.000	100000.000	100.000	0.000
.3943	25000.000	100000.000	100.000	0.000
.4259	30000.000	100000.000	100.000	0.000
.4327	31000.000	100000.000	100.000	0.000
.4396	32000.000	100000.000	100.000	0.000
.2903	0.000	120000.000	100.000	0.000
.3124	5000.000	120000.000	100.000	0.000
.3345	10000.000	120000.000	100.000	0.000
.3575	15000.000	120000.000	100.000	0.000
.3845	20000.000	120000.000	100.000	0.000
.4153	25000.000	120000.000	100.000	0.000
.4216	26000.000	120000.000	100.000	0.000
.4283	27000.000	120000.000	100.000	0.000
.3020	0.000	145000.000	100.000	0.000
.3250	5000.000	145000.000	100.000	0.000
.3496	10000.000	145000.000	100.000	0.000
.3780	15000.000	145000.000	100.000	0.000
.4065	20000.000	145000.000	100.000	0.000
.4126	21000.000	145000.000	100.000	0.000
.2520	0.000	70000.000	200.000	0.000
.2647	5000.000	70000.000	200.000	0.000
.2782	10000.000	70000.000	200.000	0.000
.2938	15000.000	70000.000	200.000	0.000
.3116	20000.000	70000.000	200.000	0.000
.3300	25000.000	70000.000	200.000	0.000
.3577	30000.000	70000.000	200.000	0.000
.3858	35000.000	70000.000	200.000	0.000

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.2908 28000.000 70000.000 200.000 0.000
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 .2378 29000.000 100000.000 200.000 0.000
 .2691 0.000 120000.000 200.000 0.000
 .2887 5000.000 120000.000 200.000 0.000
 .2082 10000.000 120000.000 200.000 0.000
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 .2681 22000.000 120000.000 200.000 0.000
 .2719 23000.000 120000.000 200.000 0.000
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 .5419 41000.000 70000.000 -50.000 18.000
 .5488 42000.000 70000.000 -50.000 18.000
 .5498 43000.000 70000.000 -50.000 18.000
 .2094 0.000 80000.000 -50.000 18.000
 .2344 5000.000 80000.000 -50.000 18.000
 .2620 10000.000 80000.000 -50.000 18.000
 .2920 15000.000 80000.000 -50.000 18.000
 .4220 20000.000 80000.000 -50.000 18.000
 .4503 25000.000 80000.000 -50.000 18.000
 .4854 30000.000 80000.000 -50.000 18.000
 .5225 35000.000 80000.000 -50.000 18.000
 .5429 38000.000 80000.000 -50.000 18.000
 .5494 37000.000 80000.000 -50.000 18.000

.5502 28000.000 80000.000 -50.000 18.000
 .2174 0.000 100000.000 -50.000 18.000
 .2455 5000.000 100000.000 -50.000 18.000
 .2743 10000.000 100000.000 -50.000 18.000
 .4040 15000.000 100000.000 -50.000 18.000
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 .4650 25476.180 100000.000 -50.000 18.000
 .5026 30000.000 100000.000 -50.000 18.000
 .5495 35000.000 100000.000 -50.000 18.000
 .5498 36000.000 100000.000 -50.000 18.000
 .2264 0.000 120000.000 -50.000 18.000
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 .2935 10000.000 120000.000 -50.000 18.000
 .4180 14583.333 120000.000 -50.000 18.000
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 .4892 25000.000 120000.000 -50.000 18.000
 .4887 26000.000 120000.000 -50.000 18.000
 .5068 27000.000 120000.000 -50.000 18.000
 .5156 28000.000 120000.000 -50.000 18.000
 .5257 29000.000 120000.000 -50.000 18.000
 .5261 30000.000 120000.000 -50.000 18.000
 .2532 0.000 145000.000 -50.000 18.000
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 .4759 20000.000 145000.000 -50.000 18.000
 .4854 21000.000 145000.000 -50.000 18.000
 .4939 22000.000 145000.000 -50.000 18.000
 .5022 23000.000 145000.000 -50.000 18.000
 .5103 24000.000 145000.000 -50.000 18.000
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 .2848 0.000 70000.000 0.000 18.000
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 .2225 10178.571 70000.000 0.000 18.000
 .2474 15000.000 70000.000 0.000 18.000
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 .4896 40000.000 70000.000 0.000 18.000
 .4965 41000.000 70000.000 0.000 18.000
 .2948 0.000 80000.000 0.000 18.000
 .2197 5000.000 80000.000 0.000 18.000
 .2445 10000.000 80000.000 0.000 18.000
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 .2913 20000.000 80000.000 0.000 18.000
 .4213 25000.000 80000.000 0.000 18.000
 .4521 30000.000 80000.000 0.000 18.000
 .4912 35000.000 80000.000 0.000 18.000
 .4981 36000.000 80000.000 0.000 18.000
 .2015 0.000 100000.000 0.000 18.000
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 .2505 10000.000 100000.000 0.000 18.000
 .2726 15000.000 100000.000 0.000 18.000
 .4019 20000.000 100000.000 0.000 18.000
 .4310 25000.000 100000.000 0.000 18.000
 .4652 30000.000 100000.000 0.000 18.000
 .4732 31000.000 100000.000 0.000 18.000
 .4816 32000.000 100000.000 0.000 18.000
 .4901 33000.000 100000.000 0.000 18.000

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3116	0.000120000.000	0.000	18.000
3365	5000.000120000.000	0.000	18.000
3633	10000.000120000.000	0.000	18.000
3909	15000.000120000.000	0.000	18.000
4195	20000.000120000.000	0.000	18.000
4522	25000.000120000.000	0.000	18.000
4587	26000.000120000.000	0.000	18.000
4676	27000.000120000.000	0.000	18.000
4760	28000.000120000.000	0.000	18.000
3263	0.000145000.000	0.000	18.000
3533	5000.000145000.000	0.000	18.000
3810	10000.000145000.000	0.000	18.000
4100	15000.000145000.000	0.000	18.000
4418	20000.000145000.000	0.000	18.000
4480	21000.000145000.000	0.000	18.000
4565	22000.000145000.000	0.000	18.000
2613	0.00070000.000	100.000	18.000
2780	5000.00070000.000	100.000	18.000
2955	10000.00070000.000	100.000	18.000
3128	15000.00070000.000	100.000	18.000
3331	20000.00070000.000	100.000	18.000
3547	25000.00070000.000	100.000	18.000
3606	30000.00070000.000	100.000	18.000
4117	35000.00070000.000	100.000	18.000
4171	40000.00070000.000	100.000	18.000
4230	47000.00070000.000	100.000	18.000
4282	50000.00070000.000	100.000	18.000
4356	55000.00070000.000	100.000	18.000
2711	0.00090000.000	100.000	18.000
2882	5000.00090000.000	100.000	18.000
3076	10000.00090000.000	100.000	18.000
3278	15000.00090000.000	100.000	18.000
3501	20000.00090000.000	100.000	18.000
3750	25000.00090000.000	100.000	18.000
4072	30000.00090000.000	100.000	18.000
4138	31000.00090000.000	100.000	18.000
4212	32000.00090000.000	100.000	18.000
4284	33000.00090000.000	100.000	18.000
2745	0.000100000.000	100.000	18.000
2956	5000.000100000.000	100.000	18.000
3147	10000.000100000.000	100.000	18.000
3351	15000.000100000.000	100.000	18.000
3590	20000.000100000.000	100.000	18.000
3776	25000.000100000.000	100.000	18.000
3936	30000.000100000.000	100.000	18.000
4000	37000.000100000.000	100.000	18.000
4066	40000.000100000.000	100.000	18.000
4135	45000.000100000.000	100.000	18.000
4205	50000.000100000.000	100.000	18.000
2825	0.000120000.000	100.000	18.000
3044	5000.000120000.000	100.000	18.000
3265	10000.000120000.000	100.000	18.000
3499	15000.000120000.000	100.000	18.000
3773	20000.000120000.000	100.000	18.000
3833	21000.000120000.000	100.000	18.000
3895	22000.000120000.000	100.000	18.000
3959	23000.000120000.000	100.000	18.000
4026	24000.000120000.000	100.000	18.000
4095	25000.000120000.000	100.000	18.000
2929	0.000145000.000	100.000	18.000
3172	5000.000145000.000	100.000	18.000
3424	10000.000145000.000	100.000	18.000
3691	15000.000145000.000	100.000	18.000
3750	16000.000145000.000	100.000	18.000
3811	17000.000145000.000	100.000	18.000
3873	18000.000145000.000	100.000	18.000
3937	19000.000145000.000	100.000	18.000
2456	0.00070000.000	200.000	18.000
2555	5000.00070000.000	200.000	18.000
2705	10000.00070000.000	200.000	18.000
2863	15000.00070000.000	200.000	18.000
3042	20000.00070000.000	200.000	18.000
3253	25000.00070000.000	200.000	18.000
3506	30000.00070000.000	200.000	18.000
3797	35000.00070000.000	200.000	18.000
3849	36000.00070000.000	200.000	18.000
3905	37000.00070000.000	200.000	18.000
2521	0.00090000.000	200.000	18.000
2651	5000.00090000.000	200.000	18.000
2819	10000.00090000.000	200.000	18.000
3009	15000.00090000.000	200.000	18.000
3228	20000.00090000.000	200.000	18.000
3472	25000.00090000.000	200.000	18.000
3761	30000.00090000.000	200.000	18.000
3824	31000.00090000.000	200.000	18.000
2557	0.000100000.000	200.000	18.000
2701	5000.000100000.000	200.000	18.000
2881	10000.000100000.000	200.000	18.000
3087	15000.000100000.000	200.000	18.000
3223	20000.000100000.000	200.000	18.000
3578	25000.000100000.000	200.000	18.000
3634	26000.000100000.000	200.000	18.000
3694	27000.000100000.000	200.000	18.000
3756	28000.000100000.000	200.000	18.000
2634	0.000120000.000	200.000	18.000
2807	5000.000120000.000	200.000	18.000
3012	10000.000120000.000	200.000	18.000
3238	15000.000120000.000	200.000	18.000
3490	20000.000120000.000	200.000	18.000
3545	21000.000120000.000	200.000	18.000
3602	22000.000120000.000	200.000	18.000
2737	0.000145000.000	200.000	18.000
2867	5000.000145000.000	200.000	18.000
3173	10000.000145000.000	200.000	18.000
3419	15000.000145000.000	200.000	18.000
3475	16000.000145000.000	200.000	18.000
2926	0.00070000.000	-50.000	36.000
3129	5000.00070000.000	-50.000	36.000
3347	10000.00070000.000	-50.000	36.000
3605	15476.9070000.000	-50.000	36.000
3864	20000.00070000.000	-50.000	36.000
4191	25000.00070000.000	-50.000	36.000
4488	30000.00070000.000	-50.000	36.000
4844	35000.00070000.000	-50.000	36.000
5174	40000.00070000.000	-50.000	36.000
5285	41000.00070000.000	-50.000	36.000
5401	42000.00070000.000	-50.000	36.000
3016	0.00090000.000	-50.000	36.000
3281	5000.00090000.000	-50.000	36.000
3556	10000.00090000.000	-50.000	36.000

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3846	15000.000	90000.000	-50.000	16.000
4131	20000.000	10000.000	-50.000	16.000
4395	25000.000	10000.000	-50.000	16.000
4778	30000.000	90000.000	-50.000	16.000
5189	35000.000	90000.000	-50.000	16.000
5315	38000.000	90000.000	-50.000	16.000
3108	0.000	100000.000	-50.000	16.000
3282	5000.000	100000.000	-50.000	16.000
3666	10000.000	100000.000	-50.000	16.000
3954	15000.000	100000.000	-50.000	16.000
4210	19761.305	100000.000	-50.000	16.000
4528	25000.000	100000.000	-50.000	16.000
4853	30000.000	100000.000	-50.000	16.000
5054	31000.000	100000.000	-50.000	16.000
5147	32000.000	100000.000	-50.000	16.000
5232	33000.000	100000.000	-50.000	16.000
5332	34000.000	100000.000	-50.000	16.000
3263	0.000	120000.000	-50.000	16.000
3538	5000.000	120000.000	-50.000	16.000
3820	10000.000	120000.000	-50.000	16.000
4082	15000.000	120000.000	-50.000	16.000
4405	20000.000	120000.000	-50.000	16.000
4798	25000.000	120000.000	-50.000	16.000
4892	26000.000	120000.000	-50.000	16.000
4992	27000.000	120000.000	-50.000	16.000
5081	28000.000	120000.000	-50.000	16.000
5176	29000.000	120000.000	-50.000	16.000
3293	0.000	145000.000	-50.000	16.000
3693	5000.000	145000.000	-50.000	16.000
3997	10000.000	145000.000	-50.000	16.000
4302	15000.000	145000.000	-50.000	16.000
4671	20000.000	145000.000	-50.000	16.000
4761	21000.000	145000.000	-50.000	16.000
4856	22000.000	145000.000	-50.000	16.000
2747	0.000	70000.000	0.000	16.000
2919	5000.000	70000.000	0.000	16.000
3188	10000.000	70000.000	0.000	16.000
3400	15000.000	70000.000	0.000	16.000
3632	20000.000	70000.000	0.000	16.000
3879	24857.143	70000.000	0.000	16.000
4187	30000.000	70000.000	0.000	16.000
4523	35000.000	70000.000	0.000	16.000
4580	36000.000	70000.000	0.000	16.000
4641	37000.000	70000.000	0.000	16.000
4704	38000.000	70000.000	0.000	16.000
4770	39000.000	70000.000	0.000	16.000
4838	40000.000	70000.000	0.000	16.000
2884	0.000	90000.000	0.000	16.000
3109	5000.000	90000.000	0.000	16.000
3341	10000.000	90000.000	0.000	16.000
3559	15000.000	90000.000	0.000	16.000
3820	20000.000	90000.000	0.000	16.000
4123	25000.000	90000.000	0.000	16.000
4452	30000.000	90000.000	0.000	16.000
4526	31000.000	90000.000	0.000	16.000
4601	32000.000	90000.000	0.000	16.000
4685	33000.000	90000.000	0.000	16.000
4770	34000.000	90000.000	0.000	16.000
4855	35000.000	90000.000	0.000	16.000
2942	0.000	100000.000	0.000	16.000
3178	5000.000	100000.000	0.000	16.000
3399	10000.000	100000.000	0.000	16.000
3645	15000.000	100000.000	0.000	16.000
3923	20000.000	100000.000	0.000	16.000
4233	25000.000	100000.000	0.000	16.000
4587	30000.000	100000.000	0.000	16.000
4668	31000.000	100000.000	0.000	16.000
4754	32000.000	100000.000	0.000	16.000
3026	0.000	120000.000	0.000	16.000
3267	5000.000	120000.000	0.000	16.000
3546	10000.000	120000.000	0.000	16.000
3817	15000.000	120000.000	0.000	16.000
4125	20000.000	120000.000	0.000	16.000
4456	25000.000	120000.000	0.000	16.000
4532	26000.000	120000.000	0.000	16.000
3163	0.000	145000.000	0.000	16.000
3437	5000.000	145000.000	0.000	16.000
3730	10000.000	145000.000	0.000	16.000
4032	15000.000	145000.000	0.000	16.000
4091	16000.000	145000.000	0.000	16.000
4152	17000.000	145000.000	0.000	16.000
4218	18000.000	145000.000	0.000	16.000
4281	19000.000	145000.000	0.000	16.000
4351	20000.000	145000.000	0.000	16.000
2542	0.000	70000.000	100.000	16.000
2690	5000.000	70000.000	100.000	16.000
2848	10000.000	70000.000	100.000	16.000
3026	15000.000	70000.000	100.000	16.000
3241	20000.000	70000.000	100.000	16.000
3464	25000.000	70000.000	100.000	16.000
3727	30000.000	70000.000	100.000	16.000
4046	35000.000	70000.000	100.000	16.000
4104	36000.000	70000.000	100.000	16.000
4166	37000.000	70000.000	100.000	16.000
4232	38000.000	70000.000	100.000	16.000
2623	0.000	90000.000	100.000	16.000
2795	5000.000	90000.000	100.000	16.000
2983	10000.000	90000.000	100.000	16.000
3197	15000.000	90000.000	100.000	16.000
3423	20000.000	90000.000	100.000	16.000
3687	25000.000	90000.000	100.000	16.000
4006	30000.000	90000.000	100.000	16.000
4078	31000.000	90000.000	100.000	16.000
4152	32000.000	90000.000	100.000	16.000
2647	0.000	100000.000	100.000	16.000
2846	5000.000	100000.000	100.000	16.000
3053	10000.000	100000.000	100.000	16.000
3274	15000.000	100000.000	100.000	16.000
3515	20000.000	100000.000	100.000	16.000
3802	25000.000	100000.000	100.000	16.000
3965	30000.000	100000.000	100.000	16.000
3931	27000.000	100000.000	100.000	16.000
4000	28000.000	100000.000	100.000	16.000
2754	0.000	120000.000	100.000	16.000
2953	5000.000	120000.000	100.000	16.000
3191	10000.000	120000.000	100.000	16.000
3429	15000.000	120000.000	100.000	16.000
3704	20000.000	120000.000	100.000	16.000
3764	21000.000	120000.000	100.000	16.000
3826	22000.000	120000.000	100.000	16.000

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3601	10000.000	90000.000	0.000	-18.000
3887	15000.000	90000.000	0.000	-18.000
4112	20000.000	90000.000	0.000	-18.000
4354	25000.000	90000.000	0.000	-18.000
4465	30000.000	90000.000	0.000	-18.000
5088	35000.000	90000.000	0.000	-18.000
5182	36000.000	90000.000	0.000	-18.000
5288	37000.000	90000.000	0.000	-18.000
5328	38000.000	90000.000	0.000	-18.000
5402	39000.000	90000.000	0.000	-18.000
3082	0.000	100000.000	0.000	-18.000
3383	5000.000	100000.000	0.000	-18.000
3689	10000.000	100000.000	0.000	-18.000
3858	15000.000	100000.000	0.000	-18.000
4176	20000.000	100000.000	0.000	-18.000
4460	25000.000	100000.000	0.000	-18.000
4797	30000.000	100000.000	0.000	-18.000
5273	35000.000	100000.000	0.000	-18.000
5343	36000.000	100000.000	0.000	-18.000
3172	0.000	120000.000	0.000	-18.000
3511	5000.000	120000.000	0.000	-18.000
3822	10000.000	120000.000	0.000	-18.000
4074	15000.000	120000.000	0.000	-18.000
4343	20000.000	120000.000	0.000	-18.000
4667	25000.000	120000.000	0.000	-18.000
5107	30000.000	120000.000	0.000	-18.000
5186	31000.000	120000.000	0.000	-18.000
5284	32000.000	120000.000	0.000	-18.000
3270	0.000	145000.000	0.000	-18.000
3621	5000.000	145000.000	0.000	-18.000
3875	10000.000	145000.000	0.000	-18.000
4247	15000.000	145000.000	0.000	-18.000
4562	20000.000	145000.000	0.000	-18.000
4840	25000.000	145000.000	0.000	-18.000
5029	26000.000	145000.000	0.000	-18.000
2648	0.000	70000.000	100.000	-18.000
2888	5000.000	70000.000	100.000	-18.000
3132	10000.000	70000.000	100.000	-18.000
3333	15000.000	70000.000	100.000	-18.000
3508	20000.000	70000.000	100.000	-18.000
3722	25000.000	70000.000	100.000	-18.000
3964	30000.000	70000.000	100.000	-18.000
4242	35000.000	70000.000	100.000	-18.000
4510	40000.000	70000.000	100.000	-18.000
4574	41000.000	70000.000	100.000	-18.000
2750	0.000	90000.000	100.000	-18.000
3019	5000.000	90000.000	100.000	-18.000
3259	10000.000	90000.000	100.000	-18.000
3448	15000.000	90000.000	100.000	-18.000
3667	20000.000	90000.000	100.000	-18.000
3815	25000.000	90000.000	100.000	-18.000
4201	30000.000	90000.000	100.000	-18.000
4525	35000.000	90000.000	100.000	-18.000
4589	36000.000	90000.000	100.000	-18.000
2783	0.000	100000.000	100.000	-18.000
3054	5000.000	100000.000	100.000	-18.000
3312	10000.000	100000.000	100.000	-18.000
3517	15000.000	100000.000	100.000	-18.000
3748	20000.000	100000.000	100.000	-18.000
4014	25000.000	100000.000	100.000	-18.000
4317	30000.000	100000.000	100.000	-18.000
4380	31000.000	100000.000	100.000	-18.000
4446	32000.000	100000.000	100.000	-18.000
4517	33000.000	100000.000	100.000	-18.000
2885	0.000	120000.000	100.000	-18.000
3150	5000.000	120000.000	100.000	-18.000
3425	10000.000	120000.000	100.000	-18.000
3654	15000.000	120000.000	100.000	-18.000
3914	20000.000	120000.000	100.000	-18.000
4209	25000.000	120000.000	100.000	-18.000
4274	26000.000	120000.000	100.000	-18.000
4339	27000.000	120000.000	100.000	-18.000
4405	28000.000	120000.000	100.000	-18.000
2987	0.000	145000.000	100.000	-18.000
3299	5000.000	145000.000	100.000	-18.000
3571	10000.000	145000.000	100.000	-18.000
3831	15000.000	145000.000	100.000	-18.000
4118	20000.000	145000.000	100.000	-18.000
4178	21000.000	145000.000	100.000	-18.000
4240	22000.000	145000.000	100.000	-18.000
4207	23000.000	145000.000	100.000	-18.000
2515	0.000	70000.000	200.000	-18.000
2724	5000.000	70000.000	200.000	-18.000
2867	10000.000	70000.000	200.000	-18.000
3021	15000.000	70000.000	200.000	-18.000
3212	20000.000	70000.000	200.000	-18.000
3417	25000.000	70000.000	200.000	-18.000
3645	30000.000	70000.000	200.000	-18.000
3915	35000.000	70000.000	200.000	-18.000
3965	36000.000	70000.000	200.000	-18.000
4015	37000.000	70000.000	200.000	-18.000
4089	38000.000	70000.000	200.000	-18.000
4125	39000.000	70000.000	200.000	-18.000
4184	40000.000	70000.000	200.000	-18.000
2577	0.000	90000.000	200.000	-18.000
2798	5000.000	90000.000	200.000	-18.000
2977	10000.000	90000.000	200.000	-18.000
3163	15000.000	90000.000	200.000	-18.000
3372	20000.000	90000.000	200.000	-18.000
3604	25000.000	90000.000	200.000	-18.000
3880	30000.000	90000.000	200.000	-18.000
3940	31000.000	90000.000	200.000	-18.000
4002	32000.000	90000.000	200.000	-18.000
4068	33000.000	90000.000	200.000	-18.000
4131	34000.000	90000.000	200.000	-18.000
2604	0.000	100000.000	200.000	-18.000
2838	5000.000	100000.000	200.000	-18.000
3036	10000.000	100000.000	200.000	-18.000
3233	15000.000	100000.000	200.000	-18.000
3451	20000.000	100000.000	200.000	-18.000
3704	25000.000	100000.000	200.000	-18.000
3998	30000.000	100000.000	200.000	-18.000
4062	31000.000	100000.000	200.000	-18.000
2689	0.000	120000.000	200.000	-18.000
2922	5000.000	120000.000	200.000	-18.000
3187	10000.000	120000.000	200.000	-18.000
3369	15000.000	120000.000	200.000	-18.000
3613	20000.000	120000.000	200.000	-18.000
3897	25000.000	120000.000	200.000	-18.000
3958	26000.000	120000.000	200.000	-18.000

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.2765	0.000145000.000	200.000	-18.000
.3024	5060.000145000.000	200.000	-18.000
.3299	10000.000145000.000	200.000	-18.000
.3528	15000.000145000.000	200.000	-18.000
.3595	16000.000145000.000	200.000	-18.000
.3647	17000.000145000.000	200.000	-18.000
.3701	18000.000145000.000	200.000	-18.000
.3757	19000.000145000.000	200.000	-18.000
.3814	20000.000145000.000	200.000	-18.000

CVRSEL27071864180616261008271123132825201430051543214731424636
FINISH

JM004V - ANALYSIS OF COVARIANCE - MULTIPLE COVARIATES - REVISED OCTOBER 2, 1972
 HEALTH SCIENCES COMPUTING FACILITY, UCLA (NADC REVISION JULY 2, 1976 J.J. FRANZ)

PROBLM4MACDT0200770010503101VES005 H002YESYESYES YES NOV5740001

PROBLEM CODE.....4MACDT
 NUMBER OF TREATMENT GROUPS..... 2
 TOTAL NUMBER OF CASES..... 770
 NUMBER OF CARDS PER CASE..... 1
 NUMBER OF ENTERING VARIABLES..... 5
 NUMBER OF VARIABLES ADDED..... 31
 INDEX OF THE DEPENDENT VARIABLE..... 1
 PRINT DATA INPUT..... YES
 NUMBER OF VARIABLES NAMED..... 5
 USE DATA CARDS OF LAST PROBLEM..... NO
 NUMBER OF GROUP DEFINITION CARDS..... 2
 PRINT RESIDUALS (WITHIN)..... YES
 PRINT RESIDUALS (TOTAL)..... YES
 PRINT TRANSGENERATED VARIABLES..... YES
 PRINT CORRELATION MATRICES..... YES
 FORECAST DATA INPUT..... NO
 REWIND INPUT TAPE..... YES
 NUMBER OF TRANSGENERATION CARDS..... 74
 SPECIFIED BCD TAPE NUMBER..... 0
 NUMBER OF VARIABLE FORMAT CARDS..... 1

TRANS-GENERATION CARDS

CARD NO.	NEW VAR.	TRANS CODE	OLD VAR(A)	CONST. OR VAR(B)
1	2	9	2	.00010
2	3	9	3	.00010
3	4	10	2	.50000
4	7	10	2	1.00000
5	8	10	3	-.50000
6	9	13	3	3.00000
7	10	13	9	3.00000
8	11	13	4	4.00000
9	12	13	5	5.00000
10	13	13	12	5.00000
11	14	13	8	8.00000
12	15	13	7	10.00000
13	16	13	7	8.00000
14	17	13	7	10.00000
15	18	13	4	5.00000
16	19	13	4	7.00000
17	20	13	4	8.00000
18	21	13	4	10.00000
19	22	13	11	6.00000
20	23	13	11	7.00000
21	24	13	11	8.00000
22	25	13	11	10.00000
23	26	13	5	4.00000
24	27	13	5	7.00000
25	28	13	5	8.00000
26	29	13	5	10.00000
27	30	13	13	6.00000
28	31	13	13	7.00000
29	32	13	13	8.00000
30	33	13	13	10.00000
31	34	13	5	4.00000
32	35	13	5	11.00000
33	36	13	13	4.00000
34	37	13	13	11.00000
35	38	13	5	14.00000
36	39	13	5	15.00000
37	40	13	5	16.00000
38	41	13	5	17.00000
39	42	13	5	18.00000
40	43	13	5	19.00000
41	44	13	5	20.00000
42	45	13	5	21.00000
43	46	13	5	22.00000
44	47	13	5	23.00000
45	48	13	5	24.00000
46	49	13	5	25.00000
47	50	13	13	14.00000
48	51	13	13	15.00000
49	52	13	13	16.00000
50	53	13	13	17.00000

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TRANS-GENERATION CARDS

CARD NO.	NEW VAR.	TRANS CODE	OLD VAR(1)	CONST. OR VAR(2)	VALUE
51	54	13	13		18.00000
52	55	13	13		19.00000
53	56	13	13		20.00000
54	57	13	13		21.00000
55	58	13	13		22.00000
56	59	13	13		23.00000
57	60	13	13		24.00000
58	61	13	13		25.00000
59	62	13	18		4.00000
60	63	13	42		10.00000
61	64	13	43		8.00000
62	65	13	45		7.00000
63	66	13	46		8.00000
64	67	13	46		10.00000
65	68	13	47		8.00000
66	69	13	47		10.00000
67	70	13	50		4.00000
68	71	13	51		4.00000
69	72	13	52		4.00000
70	73	13	53		4.00000
71	74	13	58		8.00000
72	75	13	58		10.00000
73	76	13	59		8.00000
74	77	13	59		10.00000

GROUP DEFINITION CARDS

A CASE IS IN GROUP 1 IF.
 VAR(5) IS LE 0.00000 *

A CASE IS IN GROUP 2 IF.
 VAR(5) IS GT 0.00000 *

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LABELS CARDS

0001 MACH 0002 ALT 0003 WT 0004 DC 0005 DT

THE VARIABLE FORMAT CARDS
(10X, F10, 4, 4F10, 3)

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GROUP NO. SPECIFIED	GROUP NO. ASSIGNED	SAMPLE SIZE
1	1	401
2	2	369

COVARIATE SELECTION CARDS

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CVASEL27071904180618261008271123132835201430051543214731424636

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DATA INPUT	CASE NUMBER					GROUP NUMBER
	1					1
CASE NUMBER	.3285	119.048	70000.000	-50.000	0.000	1
CASE NUMBER	2					1
CASE NUMBER	.3436	5000.000	70000.000	-50.000	0.000	1
CASE NUMBER	3					1
CASE NUMBER	.3605	10238.085	70000.000	-50.000	0.000	1
CASE NUMBER	4					1
CASE NUMBER	.3802	15000.000	70000.000	-50.000	0.000	1
CASE NUMBER	5					1
CASE NUMBER	.4021	20000.000	70000.000	-50.000	0.000	1
CASE NUMBER	6					1
CASE NUMBER	.4315	25000.000	70000.000	-50.000	0.000	1
CASE NUMBER	7					1
CASE NUMBER	.4661	30000.000	70000.000	-50.000	0.000	1
CASE NUMBER	8					1
CASE NUMBER	.5010	35000.000	70000.000	-50.000	0.000	1
CASE NUMBER	9					1
CASE NUMBER	.5415	40000.000	70000.000	-50.000	0.000	1
CASE NUMBER	10					1
CASE NUMBER	.5491	41000.000	70000.000	-50.000	0.000	1
CASE NUMBER	11					1
CASE NUMBER	.5504	42000.000	70000.000	-50.000	0.000	1
CASE NUMBER	12					1
CASE NUMBER	.5501	43000.000	70000.000	-50.000	0.000	1
CASE NUMBER	13					1
CASE NUMBER	.5536	44000.000	70000.000	-50.000	0.000	1
CASE NUMBER	14					1
CASE NUMBER	.3298	0.000	80000.000	-50.000	0.000	1
CASE NUMBER	15					1
CASE NUMBER	.3458	5000.000	80000.000	-50.000	0.000	1
CASE NUMBER	16					1
CASE NUMBER	.3704	10000.000	80000.000	-50.000	0.000	1

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DATA INPUT	CASE NUMBER					GROUP NUMBER
	17					1
CASE NUMBER	.3989	15000.000	90000.000	-50.000	0.000	1
CASE NUMBER	18					1
CASE NUMBER	.4204	20000.000	90000.000	-50.000	0.000	1
CASE NUMBER	19					1
CASE NUMBER	.4608	25000.000	90000.000	-50.000	0.000	1
CASE NUMBER	20					1
CASE NUMBER	.4952	30000.000	90000.000	-50.000	0.000	1
CASE NUMBER	21					1
CASE NUMBER	.5440	35000.000	90000.000	-50.000	0.000	1
CASE NUMBER	22					1
CASE NUMBER	.5491	36000.000	90000.000	-50.000	0.000	1
CASE NUMBER	23					1
CASE NUMBER	.5498	37000.000	90000.000	-50.000	0.000	1
CASE NUMBER	24					1
CASE NUMBER	.5499	38000.000	90000.000	-50.000	0.000	1
CASE NUMBER	25					1
CASE NUMBER	.5549	39000.000	90000.000	-50.000	0.000	1
CASE NUMBER	26					1
CASE NUMBER	.3320	0.000	100000.000	-50.000	0.000	1
CASE NUMBER	27					1
CASE NUMBER	.3515	4404.782	100000.000	-50.000	0.000	1
CASE NUMBER	28					1
CASE NUMBER	.3814	10000.000	100000.000	-50.000	0.000	1
CASE NUMBER	29					1
CASE NUMBER	.4114	15000.000	100000.000	-50.000	0.000	1
CASE NUMBER	30					1
CASE NUMBER	.4408	20000.000	100000.000	-50.000	0.000	1
CASE NUMBER	31					1
CASE NUMBER	.4730	24940.476	100000.000	-50.000	0.000	1
CASE NUMBER	32					1
CASE NUMBER	.5128	30000.000	100000.000	-50.000	0.000	1

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DATA INPUT	CASE NUMBER			GROUP NUMBER
	33			
CASE NUMBER	.5499	35000.000100000.000	-50.000	0.000
CASE NUMBER	.5510	36000.000100000.000	-50.000	0.000
CASE NUMBER	.5561	37000.000100000.000	-50.000	0.000
CASE NUMBER	.3453	0.000120000.000	-50.000	0.000
CASE NUMBER	.3728	5000.000120000.000	-50.000	0.000
CASE NUMBER	.4011	10000.000120000.000	-50.000	0.000
CASE NUMBER	.4282	15000.000120000.000	-50.000	0.000
CASE NUMBER	.4568	20000.000120000.000	-50.000	0.000
CASE NUMBER	.4841	25000.000120000.000	-50.000	0.000
CASE NUMBER	.5441	30000.000120000.000	-50.000	0.000
CASE NUMBER	.5490	31000.000120000.000	-50.000	0.000
CASE NUMBER	.5503	32000.000120000.000	-50.000	0.000
CASE NUMBER	.3618	0.000145000.000	-50.000	0.000
CASE NUMBER	.3895	5059.524145000.000	-50.000	0.000
CASE NUMBER	.4200	10416.667145000.000	-50.000	0.000
CASE NUMBER	.4440	14226.190145000.000	-50.000	0.000

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DATA INPUT	CASE NUMBER			GROUP NUMBER
	49			
CASE NUMBER	.4850	20000.000145000.000	-50.000	0.000
CASE NUMBER	.5252	25000.000145000.000	-50.000	0.000
CASE NUMBER	.5353	26000.000145000.000	-50.000	0.000
CASE NUMBER	.2986	0.00070000.000	0.000	0.000
CASE NUMBER	.3170	5000.00070000.000	0.000	0.000
CASE NUMBER	.3345	10000.00070000.000	0.000	0.000
CASE NUMBER	.3545	14583.33370000.000	0.000	0.000
CASE NUMBER	.2818	20000.00070000.000	0.000	0.000
CASE NUMBER	.4091	25000.00070000.000	0.000	0.000
CASE NUMBER	.4375	30178.57170000.000	0.000	0.000
CASE NUMBER	.4667	35000.00070000.000	0.000	0.000
CASE NUMBER	.4960	40000.00070000.000	0.000	0.000
CASE NUMBER	.5029	41000.00070000.000	0.000	0.000
CASE NUMBER	.5100	42000.00070000.000	0.000	0.000
CASE NUMBER	.5183	43000.00070000.000	0.000	0.000
CASE NUMBER	.3036	0.00050000.000	0.000	0.000

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DATA INPUT	CASE NUMBER				GROUP NUMBER
	65				
	.3272	5000.000	90000.000	0.000	0.000
	66				
	.3527	10000.000	90000.000	0.000	0.000
	67				
	.3778	15000.000	90000.000	0.000	0.000
	68				
	.4018	20000.000	90000.000	0.000	0.000
	69				
	.4279	25000.000	90000.000	0.000	0.000
	70				
	.4579	30000.000	90000.000	0.000	0.000
	71				
	.4878	35000.000	90000.000	0.000	0.000
	72				
	.5044	36000.000	90000.000	0.000	0.000
	73				
	.5117	37000.000	90000.000	0.000	0.000
	74				
	.3128	0.000	100000.000	0.000	0.000
	75				
	.3360	5000.000	100000.000	0.000	0.000
	76				
	.3615	10000.000	100000.000	0.000	0.000
	77				
	.3844	15000.000	100000.000	0.000	0.000
	78				
	.4101	20000.000	100000.000	0.000	0.000
	79				
	.4384	25000.000	100000.000	0.000	0.000
	80				
	.4719	30000.000	100000.000	0.000	0.000

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DATA INPUT	CASE NUMBER				GROUP NUMBER
	81				
	.4802	31000.000	100000.000	0.000	0.000
	82				
	.4891	32000.000	100000.000	0.000	0.000
	83				
	.4979	33000.000	100000.000	0.000	0.000
	84				
	.5061	34000.000	100000.000	0.000	0.000
	85				
	.5132	35000.000	100000.000	0.000	0.000
	86				
	.3260	119.048	120000.000	0.000	0.000
	87				
	.3472	5000.000	120000.000	0.000	0.000
	88				
	.3727	10000.000	120000.000	0.000	0.000
	89				
	.3967	15000.000	120000.000	0.000	0.000
	90				
	.4267	20000.000	120000.000	0.000	0.000
	91				
	.4594	25000.000	120000.000	0.000	0.000
	92				
	.4870	26000.000	120000.000	0.000	0.000
	93				
	.4741	27000.000	120000.000	0.000	0.000
	94				
	.4822	28000.000	120000.000	0.000	0.000
	95				
	.4912	29000.000	120000.000	0.000	0.000
	96				
	.5012	30000.000	120000.000	0.000	0.000

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DATA INPUT	CASE NUMBER				GROUP NUMBER
	97				1
CASE NUMBER	3384	0.000145000.000	0.000	0.000	1
CASE NUMBER	88				1
CASE NUMBER	3823	5000.000145000.000	0.000	0.000	1
CASE NUMBER	89				1
CASE NUMBER	3900	10000.000145000.000	0.000	0.000	1
CASE NUMBER	100				1
CASE NUMBER	4171	15000.000145000.000	0.000	0.000	1
CASE NUMBER	101				1
CASE NUMBER	4491	20000.000145000.000	0.000	0.000	1
CASE NUMBER	102				1
CASE NUMBER	4558	21000.000145000.000	0.000	0.000	1
CASE NUMBER	103				1
CASE NUMBER	4834	22000.000145000.000	0.000	0.000	1
CASE NUMBER	104				1
CASE NUMBER	4712	23000.000145000.000	0.000	0.000	1
CASE NUMBER	105				1
CASE NUMBER	4781	24000.000145000.000	0.000	0.000	1
CASE NUMBER	106				1
CASE NUMBER	2671	0.000 70000.000	100.000	0.000	1
CASE NUMBER	107				1
CASE NUMBER	2861	5000.000 70000.000	100.000	0.000	1
CASE NUMBER	108				1
CASE NUMBER	3049	10000.000 70000.000	100.000	0.000	1
CASE NUMBER	109				1
CASE NUMBER	3231	15000.000 70000.000	100.000	0.000	1
CASE NUMBER	110				1
CASE NUMBER	3418	20000.000 70000.000	100.000	0.000	1
CASE NUMBER	111				1
CASE NUMBER	3625	25000.000 70000.000	100.000	0.000	1
CASE NUMBER	112				1
CASE NUMBER	3889	30000.000 70000.000	100.000	0.000	1

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DATA INPUT	CASE NUMBER				GROUP NUMBER
	113				1
CASE NUMBER	4186	35000.000 70000.000	100.000	0.000	1
CASE NUMBER	114				1
CASE NUMBER	4238	36000.000 70000.000	100.000	0.000	1
CASE NUMBER	115				1
CASE NUMBER	4294	37000.000 70000.000	100.000	0.000	1
CASE NUMBER	116				1
CASE NUMBER	4352	38000.000 70000.000	100.000	0.000	1
CASE NUMBER	117				1
CASE NUMBER	4411	39000.000 70000.000	100.000	0.000	1
CASE NUMBER	118				1
CASE NUMBER	4473	40000.000 70000.000	100.000	0.000	1
CASE NUMBER	119				1
CASE NUMBER	2784	0.000 90000.000	100.000	0.000	1
CASE NUMBER	120				1
CASE NUMBER	3000	5000.000 90000.000	100.000	0.000	1
CASE NUMBER	121				1
CASE NUMBER	3168	10000.000 90000.000	100.000	0.000	1
CASE NUMBER	122				1
CASE NUMBER	3363	15000.000 90000.000	100.000	0.000	1
CASE NUMBER	123				1
CASE NUMBER	3584	20000.000 90000.000	100.000	0.000	1
CASE NUMBER	124				1
CASE NUMBER	3838	25000.000 90000.000	100.000	0.000	1
CASE NUMBER	125				1
CASE NUMBER	4138	30000.000 90000.000	100.000	0.000	1
CASE NUMBER	126				1
CASE NUMBER	4205	31000.000 90000.000	100.000	0.000	1
CASE NUMBER	127				1
CASE NUMBER	4271	32000.000 90000.000	100.000	0.000	1
CASE NUMBER	128				1
CASE NUMBER	4338	33000.000 90000.000	100.000	0.000	1

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DATA INPUT	CASE NUMBER					GROUP NUMBER
	128					1
	4410	34000.000	90000.000	100.000	0.000	1
	130					1
	4488	35000.000	90000.000	100.000	0.000	1
	131					1
	2847	190.476	100000.000	100.000	0.000	1
	132					1
	3052	5000.000	100000.000	100.000	0.000	1
	133					1
	3229	10000.000	100000.000	100.000	0.000	1
	134					1
	3432	15000.000	100000.000	100.000	0.000	1
	135					1
	3670	20000.000	100000.000	100.000	0.000	1
	136					1
	3843	25000.000	100000.000	100.000	0.000	1
	137					1
	4259	30000.000	100000.000	100.000	0.000	1
	138					1
	4327	31000.000	100000.000	100.000	0.000	1
	139					1
	4396	32000.000	100000.000	100.000	0.000	1
	140					1
	2903	0.000	120000.000	100.000	0.000	1
	141					1
	3126	5000.000	120000.000	100.000	0.000	1
	142					1
	2345	10000.000	120000.000	100.000	0.000	1
	143					1
	2575	15000.000	120000.000	100.000	0.000	1
	144					1
	3845	20000.000	120000.000	100.000	0.000	1

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DATA INPUT	CASE NUMBER					GROUP NUMBER
	145					1
	4153	25000.000	120000.000	100.000	0.000	1
	146					1
	4216	28000.000	120000.000	100.000	0.000	1
	147					1
	4283	27000.000	120000.000	100.000	0.000	1
	148					1
	3020	0.000	145000.000	100.000	0.000	1
	149					1
	3250	5000.000	145000.000	100.000	0.000	1
	150					1
	3496	10000.000	145000.000	100.000	0.000	1
	151					1
	3760	15000.000	145000.000	100.000	0.000	1
	152					1
	4065	20000.000	145000.000	100.000	0.000	1
	153					1
	4126	21000.000	145000.000	100.000	0.000	1
	154					1
	2520	0.000	70000.000	200.000	0.000	1
	155					1
	2847	5000.000	70000.000	200.000	0.000	1
	156					1
	2782	10000.000	70000.000	200.000	0.000	1
	157					1
	2839	15000.000	70000.000	200.000	0.000	1
	158					1
	3116	20000.000	70000.000	200.000	0.000	1
	159					1
	3340	25000.000	70000.000	200.000	0.000	1
	160					1
	3577	30000.000	70000.000	200.000	0.000	1

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DATA INPUT	CASE NUMBER					GROUP NUMBER
	161					
	3858	35000.000	70000.000	200.000	0.000	
CASE NUMBER	162					
	3908	36000.000	70000.000	200.000	0.000	
CASE NUMBER	163					
	3962	37000.000	70000.000	200.000	0.000	
CASE NUMBER	164					
	4019	38000.000	70000.000	200.000	0.000	
CASE NUMBER	165					
	2585	0.000	90000.000	200.000	0.000	
CASE NUMBER	166					
	2734	5000.000	90000.000	200.000	0.000	
CASE NUMBER	167					
	2897	10000.000	90000.000	200.000	0.000	
CASE NUMBER	168					
	3083	15000.000	90000.000	200.000	0.000	
CASE NUMBER	169					
	3298	20000.000	90000.000	200.000	0.000	
CASE NUMBER	170					
	3539	25000.000	90000.000	200.000	0.000	
CASE NUMBER	171					
	3822	30000.000	90000.000	200.000	0.000	
CASE NUMBER	172					
	3884	31000.000	90000.000	200.000	0.000	
CASE NUMBER	173					
	3948	32000.000	90000.000	200.000	0.000	
CASE NUMBER	174					
	2619	0.000	100000.000	200.000	0.000	
CASE NUMBER	175					
	2783	5000.000	100000.000	200.000	0.000	
CASE NUMBER	176					
	2956	10000.000	100000.000	200.000	0.000	

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DATA INPUT	CASE NUMBER					GROUP NUMBER
	177					
	3160	15000.000	100000.000	200.000	0.000	
CASE NUMBER	178					
	3382	20000.000	100000.000	200.000	0.000	
CASE NUMBER	179					
	3639	25000.000	100000.000	200.000	0.000	
CASE NUMBER	180					
	3698	26000.000	100000.000	200.000	0.000	
CASE NUMBER	181					
	3754	27000.000	100000.000	200.000	0.000	
CASE NUMBER	182					
	3815	28000.000	100000.000	200.000	0.000	
CASE NUMBER	183					
	3878	29000.000	100000.000	200.000	0.000	
CASE NUMBER	184					
	2691	0.000	120000.000	200.000	0.000	
CASE NUMBER	185					
	2897	5000.000	120000.000	200.000	0.000	
CASE NUMBER	186					
	3083	10000.000	120000.000	200.000	0.000	
CASE NUMBER	187					
	3304	15000.000	120000.000	200.000	0.000	
CASE NUMBER	188					
	3550	20000.000	120000.000	200.000	0.000	
CASE NUMBER	189					
	3605	21000.000	120000.000	200.000	0.000	
CASE NUMBER	190					
	3661	22000.000	120000.000	200.000	0.000	
CASE NUMBER	191					
	3719	23000.000	120000.000	200.000	0.000	
CASE NUMBER	192					
	3779	24000.000	120000.000	200.000	0.000	

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DATA INPUT	CASE NUMBER					GROUP NUMBER
	193					1
	.2821	142.857145000.000	200.000	0.000		1
	194					1
	.3032	5000.000145000.000	200.000	0.000		1
	195					1
	.3234	10000.000145000.000	200.000	0.000		1
	196					1
	.3477	15000.000145000.000	200.000	0.000		1
	197					1
	.3528	16000.000145000.000	200.000	0.000		1
	198					1
	.3584	17000.000145000.000	200.000	0.000		1
	199					1
	.3641	18000.000145000.000	200.000	0.000		1
	200					2
	.3057	0.000 70000.000	-50.000	18.000		2
	201					2
	.3284	5000.000 70000.000	-50.000	18.000		2
	202					2
	.3476	10000.000 70000.000	-50.000	18.000		2
	203					2
	.3715	15535.714 70000.000	-50.000	18.000		2
	204					2
	.3930	20000.000 70000.000	-50.000	18.000		2
	205					2
	.4240	25119.048 70000.000	-50.000	18.000		2
	206					2
	.4542	30000.000 70000.000	-50.000	18.000		2
	207					2
	.4819	35000.000 70000.000	-50.000	18.000		2
	208					2
	.5292	40000.000 70000.000	-50.000	18.000		2

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DATA INPUT	CASE NUMBER					GROUP NUMBER
	209					2
	.5419	41000.000 70000.000	-50.000	18.000		2
	210					2
	.5488	42000.000 70000.000	-50.000	18.000		2
	211					2
	.5498	43000.000 70000.000	-50.000	18.000		2
	212					2
	.3094	0.000 90000.000	-50.000	18.000		2
	213					2
	.3344	5000.000 90000.000	-50.000	18.000		2
	214					2
	.3620	10000.000 90000.000	-50.000	18.000		2
	215					2
	.3920	15000.000 90000.000	-50.000	18.000		2
	216					2
	.4220	20000.000 90000.000	-50.000	18.000		2
	217					2
	.4503	25000.000 90000.000	-50.000	18.000		2
	218					2
	.4854	30000.000 90000.000	-50.000	18.000		2
	219					2
	.5225	35000.000 90000.000	-50.000	18.000		2
	220					2
	.5439	40000.000 90000.000	-50.000	18.000		2
	221					2
	.5484	41000.000 90000.000	-50.000	18.000		2
	222					2
	.5502	42000.000 90000.000	-50.000	18.000		2
	223					2
	.3174	0.000 100000.000	-50.000	18.000		2
	224					2
	.3455	5000.000 100000.000	-50.000	18.000		2

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DATA INPUT	CASE NUMBER				GROUP NUMBER
	225	.3743 10000.000100000.000	-50.000	18.000	2
	226	.4040 15000.000100000.000	-50.000	18.000	2
	227	.4350 20476.190100000.000	-50.000	18.000	2
	228	.4650 25476.190100000.000	-50.000	18.000	2
	229	.5026 30000.000100000.000	-50.000	18.000	2
	230	.5485 35000.000100000.000	-50.000	18.000	2
	231	.5988 38000.000100000.000	-50.000	18.000	2
	232	.3384 0.000120000.000	-50.000	18.000	2
	233	.3847 5000.000120000.000	-50.000	18.000	2
	234	.3835 10000.000120000.000	-50.000	18.000	2
	235	.4180 14583.333120000.000	-50.000	18.000	2
	236	.4480 19464.286120000.000	-50.000	18.000	2
	237	.4892 25000.000120000.000	-50.000	18.000	2
	238	.4987 28000.000120000.000	-50.000	18.000	2
	239	.5068 27000.000120000.000	-50.000	18.000	2
	240	.5156 28000.000120000.000	-50.000	18.000	2

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DATA INPUT	CASE NUMBER				GROUP NUMBER
	241	.5257 28000.000120000.000	-50.000	18.000	2
	242	.5361 30000.000120000.000	-50.000	18.000	2
	243	.3532 0.000145000.000	-50.000	18.000	2
	244	.3807 5000.000145000.000	-50.000	18.000	2
	245	.4070 10000.000145000.000	-50.000	18.000	2
	246	.4382 15000.000145000.000	-50.000	18.000	2
	247	.4759 20000.000145000.000	-50.000	18.000	2
	248	.4854 21000.000145000.000	-50.000	18.000	2
	249	.4939 22000.000145000.000	-50.000	18.000	2
	250	.5022 23000.000145000.000	-50.000	18.000	2
	251	.5103 24000.000145000.000	-50.000	18.000	2
	252	.5189 25000.000145000.000	-50.000	18.000	2
	253	.2848 0.000 70000.000	0.000	18.000	2
	254	.3048 5000.000 70000.000	0.000	18.000	2
	255	.3275 10178.571 70000.000	0.000	18.000	2
	256	.3474 15000.000 70000.000	0.000	18.000	2

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DATA INPUT	CASE NUMBER				GROUP NUMBER
	257				2
	258	2734 20000.000 70000.000	0.000	18.000	2
	259	3985 25000.000 70000.000	0.000	18.000	2
	260	4281 30000.000 70000.000	0.000	18.000	2
	261	4579 35238.095 70000.000	0.000	18.000	2
	262	4896 40000.000 70000.000	0.000	18.000	2
	263	4965 41000.000 70000.000	0.000	18.000	2
	264	5348 0.000 90000.000	0.000	18.000	2
	265	5397 50000.000 90000.000	0.000	18.000	2
	266	5445 10000.000 90000.000	0.000	18.000	2
	267	5664 15000.000 90000.000	0.000	18.000	2
	268	5913 20000.000 90000.000	0.000	18.000	2
	269	6213 25000.000 90000.000	0.000	18.000	2
	270	6521 30000.000 90000.000	0.000	18.000	2
	271	6812 35000.000 90000.000	0.000	18.000	2
	272	7081 40000.000 90000.000	0.000	18.000	2
	3015	0.000 100000.000	0.000	18.000	2

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DATA INPUT	CASE NUMBER				GROUP NUMBER
	273				2
	274	7269 5000.000 100000.000	0.000	18.000	2
	275	7305 10000.000 100000.000	0.000	18.000	2
	276	7726 15000.000 100000.000	0.000	18.000	2
	277	8079 20000.000 100000.000	0.000	18.000	2
	278	8310 25000.000 100000.000	0.000	18.000	2
	279	8652 30000.000 100000.000	0.000	18.000	2
	280	8732 31000.000 100000.000	0.000	18.000	2
	281	8816 32000.000 100000.000	0.000	18.000	2
	282	8901 33000.000 100000.000	0.000	18.000	2
	283	9116 0.000 120000.000	0.000	18.000	2
	284	9385 5000.000 120000.000	0.000	18.000	2
	285	9633 10000.000 120000.000	0.000	18.000	2
	286	9809 15000.000 120000.000	0.000	18.000	2
	287	4195 20000.000 120000.000	0.000	18.000	2
	288	4522 25000.000 120000.000	0.000	18.000	2
	4597	28000.000 120000.000	0.000	18.000	2

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DATA INPUT	CASE NUMBER				GROUP NUMBER			
	288	.4676	27000.000	120000.000	0.000	18.000	GROUP NUMBER	2
	289	.4760	28000.000	120000.000	0.000	18.000	GROUP NUMBER	2
	291	.3283	0.000	145000.000	0.000	18.000	GROUP NUMBER	2
	292	.3533	5000.000	145000.000	0.000	18.000	GROUP NUMBER	2
	293	.2810	10000.000	145000.000	0.000	18.000	GROUP NUMBER	2
	294	.4100	15000.000	145000.000	0.000	18.000	GROUP NUMBER	2
	295	.4418	20000.000	145000.000	0.000	18.000	GROUP NUMBER	2
	296	.4490	21000.000	145000.000	0.000	18.000	GROUP NUMBER	2
	297	.4565	22000.000	145000.000	0.000	18.000	GROUP NUMBER	2
	298	.2613	0.000	70000.000	100.000	18.000	GROUP NUMBER	2
	299	.2780	5000.000	70000.000	100.000	18.000	GROUP NUMBER	2
	300	.2955	10000.000	70000.000	100.000	18.000	GROUP NUMBER	2
	301	.3128	15000.000	70000.000	100.000	18.000	GROUP NUMBER	2
	302	.3331	20000.000	70000.000	100.000	18.000	GROUP NUMBER	2
	303	.3547	25000.000	70000.000	100.000	18.000	GROUP NUMBER	2
	304	.3806	30000.000	70000.000	100.000	18.000	GROUP NUMBER	2

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DATA INPUT	CASE NUMBER				GROUP NUMBER			
	305	.4117	35000.000	70000.000	100.000	18.000	GROUP NUMBER	2
	306	.4171	36000.000	70000.000	100.000	18.000	GROUP NUMBER	2
	307	.4220	37000.000	70000.000	100.000	18.000	GROUP NUMBER	2
	308	.4292	38000.000	70000.000	100.000	18.000	GROUP NUMBER	2
	309	.4356	39000.000	70000.000	100.000	18.000	GROUP NUMBER	2
	310	.2711	0.000	90000.000	100.000	18.000	GROUP NUMBER	2
	311	.2892	5000.000	90000.000	100.000	18.000	GROUP NUMBER	2
	312	.3076	10000.000	90000.000	100.000	18.000	GROUP NUMBER	2
	313	.3278	15000.000	90000.000	100.000	18.000	GROUP NUMBER	2
	314	.3501	20000.000	90000.000	100.000	18.000	GROUP NUMBER	2
	315	.3762	25000.000	90000.000	100.000	18.000	GROUP NUMBER	2
	316	.4072	30000.000	90000.000	100.000	18.000	GROUP NUMBER	2
	317	.4138	31000.000	90000.000	100.000	18.000	GROUP NUMBER	2
	318	.4212	32000.000	90000.000	100.000	18.000	GROUP NUMBER	2
	319	.4284	33000.000	90000.000	100.000	18.000	GROUP NUMBER	2
	320	.2745	0.000	100000.000	100.000	18.000	GROUP NUMBER	2

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DATA INPUT	CASE NUMBER					GROUP NUMBER
	321					2
	2956	5000.000	100000.000	100.000	18.000	2
	322					2
	3141	10000.000	100000.000	100.000	18.000	2
	323					2
	3351	15000.000	100000.000	100.000	18.000	2
	324					2
	3590	20000.000	100000.000	100.000	18.000	2
	325					2
	3874	25000.000	100000.000	100.000	18.000	2
	326					2
	3936	26000.000	100000.000	100.000	18.000	2
	327					2
	4000	27000.000	100000.000	100.000	18.000	2
	328					2
	4066	28000.000	100000.000	100.000	18.000	2
	329					2
	4135	29000.000	100000.000	100.000	18.000	2
	330					2
	4205	30000.000	100000.000	100.000	18.000	2
	331					2
	2825	0.000	120000.000	100.000	18.000	2
	332					2
	3044	5000.000	120000.000	100.000	18.000	2
	333					2
	3265	10000.000	120000.000	100.000	18.000	2
	334					2
	3498	15000.000	120000.000	100.000	18.000	2
	335					2
	3773	2000.000	120000.000	100.000	18.000	2
	336					2
	3833	21000.000	120000.000	100.000	18.000	2

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DATA INPUT	CASE NUMBER					GROUP NUMBER
	337					2
	3895	22000.000	120000.000	100.000	18.000	2
	338					2
	2959	23000.000	120000.000	100.000	18.000	2
	339					2
	4026	24000.000	120000.000	100.000	18.000	2
	340					2
	4095	25000.000	120000.000	100.000	18.000	2
	341					2
	2929	0.000	145000.000	100.000	18.000	2
	342					2
	3172	5000.000	145000.000	100.000	18.000	2
	343					2
	3424	10000.000	145000.000	100.000	18.000	2
	344					2
	3697	15000.000	145000.000	100.000	18.000	2
	345					2
	3750	16000.000	145000.000	100.000	18.000	2
	346					2
	3811	17000.000	145000.000	100.000	18.000	2
	347					2
	3873	18000.000	145000.000	100.000	18.000	2
	348					2
	3937	19000.000	145000.000	100.000	18.000	2
	349					2
	2456	0.000	70000.000	200.000	18.000	2
	350					2
	2555	5000.000	70000.000	200.000	18.000	2
	351					2
	2705	10000.000	70000.000	200.000	18.000	2
	352					2
	2863	15000.000	70000.000	200.000	18.000	2

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DATA INPUT	CASE NUMBER					GROUP NUMBER
	153					2
	3042	20000.000	70000.000	200.000	18.000	2
	154					2
	3253	25000.000	70000.000	200.000	18.000	2
	155					2
	3506	30000.000	70000.000	200.000	18.000	2
	156					2
	3797	35000.000	70000.000	200.000	18.000	2
	157					2
	3849	36000.000	70000.000	200.000	18.000	2
	158					2
	3905	37000.000	70000.000	200.000	18.000	2
	159					2
	2521	0.000	90000.000	200.000	18.000	2
	160					2
	2651	5000.000	90000.000	200.000	18.000	2
	161					2
	2819	10000.000	90000.000	200.000	18.000	2
	162					2
	3009	15000.000	90000.000	200.000	18.000	2
	163					2
	3228	20000.000	90000.000	200.000	18.000	2
	164					2
	3472	25000.000	90000.000	200.000	18.000	2
	165					2
	3741	30000.000	90000.000	200.000	18.000	2
	166					2
	3824	31000.000	90000.000	200.000	18.000	2
	167					2
	2557	0.000	100000.000	200.000	18.000	2
	168					2
	2701	5000.000	100000.000	200.000	18.000	2

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DATA INPUT	CASE NUMBER					GROUP NUMBER
	169					2
	2981	10000.000	100000.000	200.000	18.000	2
	170					2
	3087	15000.000	100000.000	200.000	18.000	2
	171					2
	3323	20000.000	100000.000	200.000	18.000	2
	172					2
	3576	25000.000	100000.000	200.000	18.000	2
	173					2
	3634	28000.000	100000.000	200.000	18.000	2
	174					2
	3694	27000.000	100000.000	200.000	18.000	2
	175					2
	3756	28000.000	100000.000	200.000	18.000	2
	176					2
	2634	0.000	120000.000	200.000	18.000	2
	177					2
	2807	5000.000	120000.000	200.000	18.000	2
	178					2
	3012	10000.000	120000.000	200.000	18.000	2
	179					2
	3238	15000.000	120000.000	200.000	18.000	2
	180					2
	3490	20000.000	120000.000	200.000	18.000	2
	181					2
	3545	21000.000	120000.000	200.000	18.000	2
	182					2
	3602	22000.000	120000.000	200.000	18.000	2
	183					2
	2737	0.000	145000.000	200.000	18.000	2
	184					2
	2967	5000.000	145000.000	200.000	18.000	2

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DATA INPUT	CASE NUMBER				GROUP NUMBER
	385				2
	3173	10000.000	145000.000	200.000	18.000
CASE NUMBER	386				2
	3419	15000.000	145000.000	200.000	18.000
CASE NUMBER	387				2
	3475	18000.000	145000.000	200.000	18.000
CASE NUMBER	388				2
	2936	0.000	70000.000	-50.000	38.000
CASE NUMBER	389				2
	3129	5000.000	70000.000	-50.000	38.000
CASE NUMBER	390				2
	3347	10000.000	70000.000	-50.000	38.000
CASE NUMBER	391				2
	3805	15476.190	70000.000	-50.000	38.000
CASE NUMBER	392				2
	3884	20000.000	70000.000	-50.000	38.000
CASE NUMBER	393				2
	4193	25000.000	70000.000	-50.000	38.000
CASE NUMBER	394				2
	4488	30000.000	70000.000	-50.000	38.000
CASE NUMBER	395				2
	4844	35000.000	70000.000	-50.000	38.000
CASE NUMBER	396				2
	5174	40000.000	70000.000	-50.000	38.000
CASE NUMBER	397				2
	5285	41000.000	70000.000	-50.000	38.000
CASE NUMBER	398				2
	5401	42000.000	70000.000	-50.000	38.000
CASE NUMBER	399				2
	3018	0.000	80000.000	-50.000	38.000
CASE NUMBER	400				2
	3281	5000.000	80000.000	-50.000	38.000

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DATA INPUT	CASE NUMBER				GROUP NUMBER
	401				2
	2554	70000.000	90000.000	-50.000	38.000
CASE NUMBER	402				2
	3848	15000.000	90000.000	-50.000	38.000
CASE NUMBER	403				2
	4131	20000.000	90000.000	-50.000	38.000
CASE NUMBER	404				2
	4395	25000.000	90000.000	-50.000	38.000
CASE NUMBER	405				2
	4778	30000.000	90000.000	-50.000	38.000
CASE NUMBER	406				2
	5189	35000.000	90000.000	-50.000	38.000
CASE NUMBER	407				2
	5315	38000.000	90000.000	-50.000	38.000
CASE NUMBER	408				2
	3108	0.000	100000.000	-50.000	38.000
CASE NUMBER	409				2
	3382	5000.000	100000.000	-50.000	38.000
CASE NUMBER	410				2
	3888	10000.000	100000.000	-50.000	38.000
CASE NUMBER	411				2
	3954	15000.000	100000.000	-50.000	38.000
CASE NUMBER	412				2
	4210	19781.905	100000.000	-50.000	38.000
CASE NUMBER	413				2
	4528	25000.000	100000.000	-50.000	38.000
CASE NUMBER	414				2
	4853	30000.000	100000.000	-50.000	38.000
CASE NUMBER	415				2
	5954	31000.000	100000.000	-50.000	38.000
CASE NUMBER	416				2
	5147	32000.000	100000.000	-50.000	38.000

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DATA INPUT	CASE NUMBER				GROUP NUMBER
	417				2
CASE NUMBER	5232	32000.000	100000.000	-50.000	36.000
CASE NUMBER	418				2
CASE NUMBER	5332	14000.000	100000.000	-50.000	36.000
CASE NUMBER	419				2
CASE NUMBER	3263	0.000	120000.000	-50.000	36.000
CASE NUMBER	420				2
CASE NUMBER	3538	5000.000	120000.000	-50.000	36.000
CASE NUMBER	421				2
CASE NUMBER	3820	10000.000	120000.000	-50.000	36.000
CASE NUMBER	422				2
CASE NUMBER	4092	15000.000	120000.000	-50.000	36.000
CASE NUMBER	423				2
CASE NUMBER	4405	20000.000	120000.000	-50.000	36.000
CASE NUMBER	424				2
CASE NUMBER	4796	25000.000	120000.000	-50.000	36.000
CASE NUMBER	425				2
CASE NUMBER	4882	28000.000	120000.000	-50.000	36.000
CASE NUMBER	426				2
CASE NUMBER	4992	27000.000	120000.000	-50.000	36.000
CASE NUMBER	427				2
CASE NUMBER	5081	28000.000	120000.000	-50.000	36.000
CASE NUMBER	428				2
CASE NUMBER	5176	28000.000	120000.000	-50.000	36.000
CASE NUMBER	429				2
CASE NUMBER	3293	0.000	145000.000	-50.000	36.000
CASE NUMBER	430				2
CASE NUMBER	3683	5000.000	145000.000	-50.000	36.000
CASE NUMBER	431				2
CASE NUMBER	3997	10000.000	145000.000	-50.000	36.000
CASE NUMBER	432				2
CASE NUMBER	4302	15000.000	145000.000	-50.000	36.000

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DATA INPUT	CASE NUMBER				GROUP NUMBER
	433				2
CASE NUMBER	4671	20000.000	145000.000	-50.000	36.000
CASE NUMBER	434				2
CASE NUMBER	4781	21000.000	145000.000	-50.000	36.000
CASE NUMBER	435				2
CASE NUMBER	4856	22000.000	145000.000	-50.000	36.000
CASE NUMBER	436				2
CASE NUMBER	2747	0.000	70000.000	0.000	36.000
CASE NUMBER	437				2
CASE NUMBER	2919	5000.000	70000.000	0.000	36.000
CASE NUMBER	438				2
CASE NUMBER	3168	10000.000	70000.000	0.000	36.000
CASE NUMBER	439				2
CASE NUMBER	3400	15000.000	70000.000	0.000	36.000
CASE NUMBER	440				2
CASE NUMBER	3632	20000.000	70000.000	0.000	36.000
CASE NUMBER	441				2
CASE NUMBER	3879	24857.143	70000.000	0.000	36.000
CASE NUMBER	442				2
CASE NUMBER	4187	30000.000	70000.000	0.000	36.000
CASE NUMBER	443				2
CASE NUMBER	4523	35000.000	70000.000	0.000	36.000
CASE NUMBER	444				2
CASE NUMBER	4580	36000.000	70000.000	0.000	36.000
CASE NUMBER	445				2
CASE NUMBER	4641	37000.000	70000.000	0.000	36.000
CASE NUMBER	446				2
CASE NUMBER	4704	38000.000	70000.000	0.000	36.000
CASE NUMBER	447				2
CASE NUMBER	4770	38000.000	70000.000	0.000	36.000
CASE NUMBER	448				2
CASE NUMBER	4838	40000.000	70000.000	0.000	36.000

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DATA INPUT	449					GROUP NUMBER	2	
CASE NUMBER	2884	0.000	90000.000	0.000	36.000	GROUP NUMBER	2	
CASE NUMBER	450	3100	5000.000	90000.000	0.000	36.000	GROUP NUMBER	2
CASE NUMBER	451	3241	10000.000	90000.000	0.000	36.000	GROUP NUMBER	2
CASE NUMBER	452	3559	15000.000	90000.000	0.000	36.000	GROUP NUMBER	2
CASE NUMBER	453	3820	20000.000	90000.000	0.000	36.000	GROUP NUMBER	2
CASE NUMBER	454	4123	25000.000	90000.000	0.000	36.000	GROUP NUMBER	2
CASE NUMBER	455	4452	30000.000	90000.000	0.000	36.000	GROUP NUMBER	2
CASE NUMBER	456	4526	31000.000	90000.000	0.000	36.000	GROUP NUMBER	2
CASE NUMBER	457	4601	32000.000	90000.000	0.000	36.000	GROUP NUMBER	2
CASE NUMBER	458	4685	33000.000	90000.000	0.000	36.000	GROUP NUMBER	2
CASE NUMBER	459	4770	34000.000	90000.000	0.000	36.000	GROUP NUMBER	2
CASE NUMBER	460	4855	35000.000	90000.000	0.000	36.000	GROUP NUMBER	2
CASE NUMBER	461	4942	0.000	100000.000	0.000	36.000	GROUP NUMBER	2
CASE NUMBER	462	3178	5000.000	100000.000	0.000	36.000	GROUP NUMBER	2
CASE NUMBER	463	3299	10000.000	100000.000	0.000	36.000	GROUP NUMBER	2
CASE NUMBER	464	3645	15000.000	100000.000	0.000	36.000	GROUP NUMBER	2

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DATA INPUT	465					GROUP NUMBER	2	
CASE NUMBER	3923	20000.000	100000.000	0.000	36.000	GROUP NUMBER	2	
CASE NUMBER	466	4233	25000.000	100000.000	0.000	36.000	GROUP NUMBER	2
CASE NUMBER	467	4587	30000.000	100000.000	0.000	36.000	GROUP NUMBER	2
CASE NUMBER	468	4868	31000.000	100000.000	0.000	36.000	GROUP NUMBER	2
CASE NUMBER	469	4754	32000.000	100000.000	0.000	36.000	GROUP NUMBER	2
CASE NUMBER	470	3026	0.000	120000.000	0.000	36.000	GROUP NUMBER	2
CASE NUMBER	471	3287	5000.000	120000.000	0.000	36.000	GROUP NUMBER	2
CASE NUMBER	472	3548	10000.000	120000.000	0.000	36.000	GROUP NUMBER	2
CASE NUMBER	473	3817	15000.000	120000.000	0.000	36.000	GROUP NUMBER	2
CASE NUMBER	474	4125	20000.000	120000.000	0.000	36.000	GROUP NUMBER	2
CASE NUMBER	475	4456	25000.000	120000.000	0.000	36.000	GROUP NUMBER	2
CASE NUMBER	476	4522	26000.000	120000.000	0.000	36.000	GROUP NUMBER	2
CASE NUMBER	477	3143	0.000	145000.000	0.000	36.000	GROUP NUMBER	2
CASE NUMBER	478	3427	5000.000	145000.000	0.000	36.000	GROUP NUMBER	2
CASE NUMBER	479	3730	10000.000	145000.000	0.000	36.000	GROUP NUMBER	2
CASE NUMBER	480	4022	15000.000	145000.000	0.000	36.000	GROUP NUMBER	2

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DATA INPUT	CASE NUMBER					GROUP NUMBER
	481					2
	.8091	16000.000	145000.000	0.000	36.000	2
	482					2
	.4152	17000.000	145000.000	0.000	36.000	2
	483					2
	.4216	18000.000	145000.000	0.000	36.000	2
	484					2
	.4281	19000.000	145000.000	0.000	36.000	2
	485					2
	.4351	20000.000	145000.000	0.000	36.000	2
	486					2
	.2542	0.000	70000.000	100.000	36.000	2
	487					2
	.2680	5000.000	70000.000	100.000	36.000	2
	488					2
	.2848	10000.000	70000.000	100.000	36.000	2
	489					2
	.3026	15000.000	70000.000	100.000	36.000	2
	490					2
	.3241	20000.000	70000.000	100.000	36.000	2
	491					2
	.3464	25000.000	70000.000	100.000	36.000	2
	492					2
	.3727	30000.000	70000.000	100.000	36.000	2
	493					2
	.4046	35000.000	70000.000	100.000	36.000	2
	494					2
	.4104	36000.000	70000.000	100.000	36.000	2
	495					2
	.4166	37000.000	70000.000	100.000	36.000	2
	496					2
	.4222	38000.000	70000.000	100.000	36.000	2

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DATA INPUT	CASE NUMBER					GROUP NUMBER
	487					2
	.2423	0.000	90000.000	100.000	36.000	2
	498					2
	.2795	5000.000	90000.000	100.000	36.000	2
	499					2
	.2983	10000.000	90000.000	100.000	36.000	2
	500					2
	.3197	15000.000	90000.000	100.000	36.000	2
	501					2
	.3423	20000.000	90000.000	100.000	36.000	2
	502					2
	.3687	25000.000	90000.000	100.000	36.000	2
	503					2
	.4006	30000.000	90000.000	100.000	36.000	2
	504					2
	.4078	31000.000	90000.000	100.000	36.000	2
	505					2
	.4152	32000.000	90000.000	100.000	36.000	2
	506					2
	.2667	0.000	100000.000	100.000	36.000	2
	507					2
	.2846	5000.000	100000.000	100.000	36.000	2
	508					2
	.3053	10000.000	100000.000	100.000	36.000	2
	509					2
	.3274	15000.000	100000.000	100.000	36.000	2
	510					2
	.3515	20000.000	100000.000	100.000	36.000	2
	511					2
	.3802	25000.000	100000.000	100.000	36.000	2
	512					2
	.3865	26000.000	100000.000	100.000	36.000	2

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DATA INPUT	CASE NUMBER	513	27000.000100000.000	100.000	36.000	GROUP NUMBER	2
CASE NUMBER	514	.4000	28000.000100000.000	100.000	36.000	GROUP NUMBER	2
CASE NUMBER	515	.2754	0.000120000.000	100.000	36.000	GROUP NUMBER	2
CASE NUMBER	516	.2953	5000.000120000.000	100.000	36.000	GROUP NUMBER	2
CASE NUMBER	517	.3191	10000.000120000.000	100.000	36.000	GROUP NUMBER	2
CASE NUMBER	518	.3429	15000.000120000.000	100.000	36.000	GROUP NUMBER	2
CASE NUMBER	519	.3704	20000.000120000.000	100.000	36.000	GROUP NUMBER	2
CASE NUMBER	520	.3764	21000.000120000.000	100.000	36.000	GROUP NUMBER	2
CASE NUMBER	521	.3826	22000.000120000.000	100.000	36.000	GROUP NUMBER	2
CASE NUMBER	522	.3891	23000.000120000.000	100.000	36.000	GROUP NUMBER	2
CASE NUMBER	523	.2868	0.000145000.000	100.000	36.000	GROUP NUMBER	2
CASE NUMBER	524	.3096	5000.000145000.000	100.000	36.000	GROUP NUMBER	2
CASE NUMBER	525	.3356	10000.000145000.000	100.000	36.000	GROUP NUMBER	2
CASE NUMBER	526	.3629	15000.000145000.000	100.000	36.000	GROUP NUMBER	2
CASE NUMBER	527	.3688	16000.000145000.000	100.000	36.000	GROUP NUMBER	2
CASE NUMBER	528	.2383	0.00070000.000	200.000	36.000	GROUP NUMBER	2

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DATA INPUT	CASE NUMBER	529	5000.00070000.000	200.000	36.000	GROUP NUMBER	2
CASE NUMBER	530	.2471	10000.00070000.000	200.000	36.000	GROUP NUMBER	2
CASE NUMBER	531	.2788	15000.00070000.000	200.000	36.000	GROUP NUMBER	2
CASE NUMBER	532	.2973	20000.00070000.000	200.000	36.000	GROUP NUMBER	2
CASE NUMBER	533	.3187	25000.00070000.000	200.000	36.000	GROUP NUMBER	2
CASE NUMBER	534	.3438	30000.00070000.000	200.000	36.000	GROUP NUMBER	2
CASE NUMBER	535	.3733	35000.00070000.000	200.000	36.000	GROUP NUMBER	2
CASE NUMBER	536	.3787	36000.00070000.000	200.000	36.000	GROUP NUMBER	2
CASE NUMBER	537	.2439	0.00090000.000	200.000	36.000	GROUP NUMBER	2
CASE NUMBER	538	.2572	5000.00090000.000	200.000	36.000	GROUP NUMBER	2
CASE NUMBER	539	.2743	10000.00090000.000	200.000	36.000	GROUP NUMBER	2
CASE NUMBER	540	.2939	15000.00090000.000	200.000	36.000	GROUP NUMBER	2
CASE NUMBER	541	.3165	20000.00090000.000	200.000	36.000	GROUP NUMBER	2
CASE NUMBER	542	.3410	25000.00090000.000	200.000	36.000	GROUP NUMBER	2
CASE NUMBER	543	.3464	26000.00090000.000	200.000	36.000	GROUP NUMBER	2
CASE NUMBER	544	.3519	27000.00090000.000	200.000	36.000	GROUP NUMBER	2

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DATA INPUT	CASE NUMBER	GROUP NUMBER
545	2577 28000.000 80000.000	200.000 36.000
546	3638 28000.000 90000.000	200.000 36.000
547	2479 0.000 100000.000	200.000 36.000
548	2825 5000.000 100000.000	200.000 36.000
549	2809 10000.000 100000.000	200.000 36.000
550	3018 15000.000 100000.000	200.000 36.000
551	3254 20000.000 100000.000	200.000 36.000
552	3517 25000.000 100000.000	200.000 36.000
553	3575 26000.000 100000.000	200.000 36.000
554	2584 0.000 120000.000	200.000 36.000
555	2736 5000.000 120000.000	200.000 36.000
556	2943 10000.000 120000.000	200.000 36.000
557	3178 15000.000 120000.000	200.000 36.000
558	3227 16000.000 120000.000	200.000 36.000
559	3278 17000.000 120000.000	200.000 36.000
560	3328 18000.000 120000.000	200.000 36.000

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DATA INPUT	CASE NUMBER	GROUP NUMBER
561	2375 19000.000 120000.000	200.000 36.000
562	2432 20000.000 120000.000	200.000 36.000
563	2675 0.000 145000.000	200.000 36.000
564	2875 5000.000 145000.000	200.000 36.000
565	3115 10000.000 145000.000	200.000 36.000
566	3162 11000.000 145000.000	200.000 36.000
567	3211 12000.000 145000.000	200.000 36.000
568	3260 13000.000 145000.000	200.000 36.000
569	3156 0.000 70000.000	-50.000 -18.000
570	3465 5418.667 70000.000	-50.000 -18.000
571	3750 10357.143 70000.000	-50.000 -18.000
572	3965 15000.000 70000.000	-50.000 -18.000
573	4116 20000.000 70000.000	-50.000 -18.000
574	4374 25000.000 70000.000	-50.000 -18.000
575	4734 30000.000 70000.000	-50.000 -18.000
576	5211 35000.000 70000.000	-50.000 -18.000

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DATA INPUT	CASE NUMBER	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	GROUP NUMBER
		.5474	40000.000	70000.000	-50.000	-18.000												1
		.5486	41000.000	70000.000	-50.000	-18.000												1
		.5502	42000.000	70000.000	-50.000	-18.000												1
		.5505	43000.000	70000.000	-50.000	-18.000												1
		.5543	44000.000	70000.000	-50.000	-18.000												1
		.5588	45000.000	70000.000	-50.000	-18.000												1
		.7145	0.000	90000.000	-50.000	-18.000												1
		.3504	5000.000	90000.000	-50.000	-18.000												1
		.3818	10000.000	90000.000	-50.000	-18.000												1
		.4030	15000.000	90000.000	-50.000	-18.000												1
		.4386	20000.000	90000.000	-50.000	-18.000												1
		.4701	25000.000	90000.000	-50.000	-18.000												1
		.5100	30000.000	90000.000	-50.000	-18.000												1
		.5482	35000.000	90000.000	-50.000	-18.000												1
		.5485	36000.000	90000.000	-50.000	-18.000												1
		.5500	37000.000	90000.000	-50.000	-18.000												1

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DATA INPUT	CASE NUMBER	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	GROUP NUMBER
		.5507	38000.000	90000.000	-50.000	-18.000												1
		.5555	39000.000	90000.000	-50.000	-18.000												1
		.5611	40000.000	90000.000	-50.000	-18.000												1
		.3200	0.000	100000.000	-50.000	-18.000												1
		.3545	5000.000	100000.000	-50.000	-18.000												1
		.3882	10000.000	100000.000	-50.000	-18.000												1
		.4170	15000.000	100000.000	-50.000	-18.000												1
		.4487	20000.000	100000.000	-50.000	-18.000												1
		.4808	25000.000	100000.000	-50.000	-18.000												1
		.5217	30000.000	100000.000	-50.000	-18.000												1
		.5500	35000.000	100000.000	-50.000	-18.000												1
		.5509	36000.000	100000.000	-50.000	-18.000												1
		.5566	37000.000	100000.000	-50.000	-18.000												1
		.5629	38000.000	100000.000	-50.000	-18.000												1
		.3346	0.000	120000.000	-50.000	-18.000												1
		.3707	5000.000	120000.000	-50.000	-18.000												1

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DATA INPUT	CASE NUMBER				GROUP NUMBER
	609				1
	4078	10000.000120000.000	-50.000	-18.000	1
	610				1
	4378	15000.000120000.000	-50.000	-18.000	1
	611				1
	4672	20000.000120000.000	-50.000	-18.000	1
	612				1
	5026	25000.000120000.000	-50.000	-18.000	1
	613				1
	5488	30000.000120000.000	-50.000	-18.000	1
	614				1
	5489	31000.000120000.000	-50.000	-18.000	1
	615				1
	5507	32000.000120000.000	-50.000	-18.000	1
	616				1
	5547	33000.000120000.000	-50.000	-18.000	1
	617				1
	5608	34000.000120000.000	-50.000	-18.000	1
	618				1
	3455	0.000145000.000	-50.000	-18.000	1
	619				1
	3857	5000.000145000.000	-50.000	-18.000	1
	620				1
	4254	10000.000145000.000	-50.000	-18.000	1
	621				1
	4555	14523.810145000.000	-50.000	-18.000	1
	622				1
	4925	20000.000145000.000	-50.000	-18.000	1
	623				1
	5342	25000.000145000.000	-50.000	-18.000	1
	624				1
	5438	26000.000145000.000	-50.000	-18.000	1

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DATA INPUT	CASE NUMBER				GROUP NUMBER
	625				1
	3484	27000.000145000.000	-50.000	-18.000	1
	626				1
	5501	28000.000145000.000	-50.000	-18.000	1
	627				1
	2925	0.00070000.000	0.000	-18.000	1
	628				1
	3190	5000.00070000.000	0.000	-18.000	1
	629				1
	3473	10000.00070000.000	0.000	-18.000	1
	630				1
	3665	14464.28870000.000	0.000	-18.000	1
	631				1
	3885	20000.00070000.000	0.000	-18.000	1
	632				1
	4140	25238.09570000.000	0.000	-18.000	1
	633				1
	44.5	30000.00070000.000	0.000	-18.000	1
	634				1
	4721	35000.00070000.000	0.000	-18.000	1
	635				1
	5066	40000.00070000.000	0.000	-18.000	1
	636				1
	5159	41000.00070000.000	0.000	-18.000	1
	637				1
	5240	42000.00070000.000	0.000	-18.000	1
	638				1
	5315	43000.00070000.000	0.000	-18.000	1
	639				1
	5385	44000.00070000.000	0.000	-18.000	1
	640				1
	3005	0.00090000.000	0.000	-18.000	1

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DATA INPUT	CASE NUMBER					GROUP NUMBER	
	641	3310	5000.000	90000.000	0.000	-18.000	1
	642	3601	10000.000	90000.000	0.000	-18.000	1
	643	3867	15000.000	90000.000	0.000	-18.000	1
	644	4112	20000.000	90000.000	0.000	-18.000	1
	645	4354	25000.000	90000.000	0.000	-18.000	1
	646	4665	30000.000	90000.000	0.000	-18.000	1
	647	5086	35000.000	90000.000	0.000	-18.000	1
	648	5182	38000.000	90000.000	0.000	-18.000	1
	649	5259	37000.000	90000.000	0.000	-18.000	1
	650	5328	28000.000	90000.000	0.000	-18.000	1
	651	5402	39000.000	90000.000	0.000	-18.000	1
	652	3082	0.000	100000.000	0.000	-18.000	1
	653	3393	5000.000	100000.000	0.000	-18.000	1
	654	3699	10000.000	100000.000	0.000	-18.000	1
	655	3959	15000.000	100000.000	0.000	-18.000	1
	656	4176	20000.000	100000.000	0.000	-18.000	1

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DATA INPUT	CASE NUMBER					GROUP NUMBER	
	657	4460	25000.000	100000.000	0.000	-18.000	1
	658	4797	30000.000	100000.000	0.000	-18.000	1
	659	5273	35000.000	100000.000	0.000	-18.000	1
	660	5343	38000.000	100000.000	0.000	-18.000	1
	661	3172	0.000	120000.000	0.000	-18.000	1
	662	3511	5000.000	120000.000	0.000	-18.000	1
	663	3832	10000.000	120000.000	0.000	-18.000	1
	664	4074	15000.000	120000.000	0.000	-18.000	1
	665	4343	20000.000	120000.000	0.000	-18.000	1
	666	4667	25000.000	120000.000	0.000	-18.000	1
	667	5107	30000.000	120000.000	0.000	-18.000	1
	668	5196	31000.000	120000.000	0.000	-18.000	1
	669	5286	32000.000	120000.000	0.000	-18.000	1
	670	3270	0.000	145000.000	0.000	-18.000	1
	671	3621	5000.000	145000.000	0.000	-18.000	1
	672	3975	10000.000	145000.000	0.000	-18.000	1

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DATA INPUT	CASE NUMBER	GROUP NUMBER
	673	1
4247 15000.000145000.000	0.000	-18.000
CASE NUMBER	674	1
4562 20000.000145000.000	0.000	-18.000
CASE NUMBER	675	1
4940 25000.000145000.000	0.000	-18.000
CASE NUMBER	676	1
5029 26000.000145000.000	0.000	-18.000
CASE NUMBER	677	1
2648 0.000 70000.000	100.000	-18.000
CASE NUMBER	678	1
2898 5000.000 70000.000	100.000	-18.000
CASE NUMBER	679	1
3133 10000.000 70000.000	100.000	-18.000
CASE NUMBER	680	1
3333 15000.000 70000.000	100.000	-18.000
CASE NUMBER	681	1
3508 20000.000 70000.000	100.000	-18.000
CASE NUMBER	682	1
3722 25000.000 70000.000	100.000	-18.000
CASE NUMBER	683	1
3964 30000.000 70000.000	100.000	-18.000
CASE NUMBER	684	1
4242 35000.000 70000.000	100.000	-18.000
CASE NUMBER	685	1
4510 40000.000 70000.000	100.000	-18.000
CASE NUMBER	686	1
4574 41000.000 70000.000	100.000	-18.000
CASE NUMBER	687	1
2750 0.000 90000.000	100.000	-18.000
CASE NUMBER	688	1
3019 5000.000 90000.000	100.000	-18.000

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DATA INPUT	CASE NUMBER	GROUP NUMBER
	689	1
3259 10000.000 90000.000	100.000	-18.000
CASE NUMBER	690	1
3449 15000.000 90000.000	100.000	-18.000
CASE NUMBER	691	1
3667 20000.000 90000.000	100.000	-18.000
CASE NUMBER	692	1
3915 25000.000 90000.000	100.000	-18.000
CASE NUMBER	693	1
4201 30000.000 90000.000	100.000	-18.000
CASE NUMBER	694	1
4525 35000.000 90000.000	100.000	-18.000
CASE NUMBER	695	1
4589 36000.000 90000.000	100.000	-18.000
CASE NUMBER	696	1
2783 0.000100000.000	100.000	-18.000
CASE NUMBER	697	1
3054 5000.000100000.000	100.000	-18.000
CASE NUMBER	698	1
3312 10000.000100000.000	100.000	-18.000
CASE NUMBER	699	1
3517 15000.000100000.000	100.000	-18.000
CASE NUMBER	700	1
3749 20000.000100000.000	100.000	-18.000
CASE NUMBER	701	1
4014 25000.000100000.000	100.000	-18.000
CASE NUMBER	702	1
4317 30000.000100000.000	100.000	-18.000
CASE NUMBER	703	1
4380 31000.000100000.000	100.000	-18.000
CASE NUMBER	704	1
4446 32000.000100000.000	100.000	-18.000

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DATA INPUT	CASE NUMBER				GROUP NUMBER
	705				
	4517	33000.000	100000.000	100.000	-18.000
CASE NUMBER	706				
	2845	0.000	120000.000	100.000	-18.000
CASE NUMBER	707				
	3150	5000.000	120000.000	100.000	-18.000
CASE NUMBER	708				
	3425	10000.000	120000.000	100.000	-18.000
CASE NUMBER	709				
	3654	15000.000	120000.000	100.000	-18.000
CASE NUMBER	710				
	3814	20000.000	120000.000	100.000	-18.000
CASE NUMBER	711				
	4209	25000.000	120000.000	100.000	-18.000
CASE NUMBER	712				
	4274	26000.000	120000.000	100.000	-18.000
CASE NUMBER	713				
	4339	27000.000	120000.000	100.000	-18.000
CASE NUMBER	714				
	4405	3000.000	120000.000	100.000	-18.000
CASE NUMBER	715				
	2987	0.000	145000.000	100.000	-18.000
CASE NUMBER	716				
	3299	5000.000	145000.000	100.000	-18.000
CASE NUMBER	717				
	3571	10000.000	145000.000	100.000	-18.000
CASE NUMBER	718				
	3831	15000.000	145000.000	100.000	-18.000
CASE NUMBER	719				
	4118	20000.000	145000.000	100.000	-18.000
CASE NUMBER	720				
	4178	21000.000	145000.000	100.000	-18.000

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DATA INPUT	CASE NUMBER				GROUP NUMBER
	721				
	4240	22000.000	145000.000	100.000	-18.000
CASE NUMBER	722				
	4307	23000.000	145000.000	100.000	-18.000
CASE NUMBER	723				
	2515	0.000	70000.000	200.000	-18.000
CASE NUMBER	724				
	2724	5000.000	70000.000	200.000	-18.000
CASE NUMBER	725				
	2887	10000.000	70000.000	200.000	-18.000
CASE NUMBER	726				
	3021	15000.000	70000.000	200.000	-18.000
CASE NUMBER	727				
	3212	20000.000	70000.000	200.000	-18.000
CASE NUMBER	728				
	3417	25000.000	70000.000	200.000	-18.000
CASE NUMBER	729				
	3645	30000.000	70000.000	200.000	-18.000
CASE NUMBER	730				
	3815	35000.000	70000.000	200.000	-18.000
CASE NUMBER	731				
	3965	38000.000	70000.000	200.000	-18.000
CASE NUMBER	732				
	4015	37000.000	70000.000	200.000	-18.000
CASE NUMBER	733				
	4088	38000.000	70000.000	200.000	-18.000
CASE NUMBER	734				
	4125	39000.000	70000.000	200.000	-18.000
CASE NUMBER	735				
	4184	40000.000	70000.000	200.000	-18.000
CASE NUMBER	736				
	2572	0.000	90000.000	200.000	-18.000

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DATA INPUT	CASE NUMBER					GROUP NUMBER
	737					1
	.2799	5000.000	80000.000	200.000	-18.000	1
	738					1
	.2977	10000.000	80000.000	200.000	-18.000	1
	739					1
	.3163	15000.000	80000.000	200.000	-18.000	1
	740					1
	.3372	20000.000	80000.000	200.000	-18.000	1
	741					1
	.3406	25000.000	80000.000	200.000	-18.000	1
	742					1
	.3880	30000.000	80000.000	200.000	-18.000	1
	743					1
	.3940	31000.000	80000.000	200.000	-18.000	1
	744					1
	.4002	32000.000	80000.000	200.000	-18.000	1
	745					1
	.4066	33000.000	80000.000	200.000	-18.000	1
	746					1
	.4131	34000.000	80000.000	200.000	-18.000	1
	747					1
	.2604	0.000	100000.000	200.000	-18.000	1
	748					1
	.2838	5000.000	100000.000	200.000	-18.000	1
	749					1
	.2036	10000.000	100000.000	200.000	-18.000	1
	750					1
	.3233	15000.000	100000.000	200.000	-18.000	1
	751					1
	.3451	20000.000	100000.000	200.000	-18.000	1
	752					1
	.3704	25000.000	100000.000	200.000	-18.000	1

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DATA INPUT	CASE NUMBER					GROUP NUMBER
	753					1
	.3998	30000.000	100000.000	200.000	-18.000	1
	754					1
	.4062	31000.000	100000.000	200.000	-18.000	1
	755					1
	.2889	0.000	120000.000	200.000	-18.000	1
	756					1
	.2922	5000.000	120000.000	200.000	-18.000	1
	757					1
	.3157	10000.000	120000.000	200.000	-18.000	1
	758					1
	.3369	15000.000	120000.000	200.000	-18.000	1
	759					1
	.3613	20000.000	120000.000	200.000	-18.000	1
	760					1
	.3697	25000.000	120000.000	200.000	-18.000	1
	761					1
	.3858	26000.000	120000.000	200.000	-18.000	1
	762					1
	.2785	0.000	145000.000	200.000	-18.000	1
	763					1
	.3034	5000.000	145000.000	200.000	-18.000	1
	764					1
	.3299	10000.000	145000.000	200.000	-18.000	1
	765					1
	.3538	15000.000	145000.000	200.000	-18.000	1
	766					1
	.3595	16000.000	145000.000	200.000	-18.000	1
	767					1
	.3847	17000.000	145000.000	200.000	-18.000	1
	768					1
	.3701	18000.000	145000.000	200.000	-18.000	1

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DATA INPUT						
CASE NUMBER	769				GROUP NUMBER	1
	3757	19000.000145000.000	200.000	-18.000		
CASE NUMBER	770				GROUP NUMBER	1
	3814	20000.000145000.000	200.000	-18.000		

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VARIABLE MEANS FOR EACH GROUP

GROUP NO. 1

(X(7) .3428446E+01) (X(19) .1571350E+03) (DC .5673317E+02) (X(18) .6945226E+02) (X(6) .1317380E+01) (X(16) .1138388E+01)
 (X(26) .1202251E+02) (X(10) .1227600E+04) (X(8) .3219179E+00) (X(27) .3178597E+02) (X(11) .1240025E+05) (X(23) .3744072E+05)
 (X(13) .2937815E+04) (X(28) .2916512E+01) (X(25) .1534565E+08) (X(20) .1825670E+02) (X(14) .4291789E+00) (X(30) .3895293E+04)
 (DT .9067332E+01) (X(15) .3431580E+04) (X(43) .1408095E+04) (X(21) .7052837E+05) (X(47) .3534528E+06) (X(31) .1028865E+05)
 (X(42) .6195607E+03) (X(46) .1441665E+06) (X(36) .1643431E+06) (MACH .4055491E+00)

GROUP NO. 2

(X(7) .2947948E+01) (X(19) .1285165E+02) (DC .5687805E+02) (X(18) .6271224E+02) (X(6) .1244699E+01) (X(16) .9780265E+00)
 (X(26) .3328571E+02) (X(10) .1282583E+04) (X(8) .3208833E+00) (X(27) .7839730E+02) (X(11) .1187669E+05) (X(23) .2895849E+05)
 (X(13) .2585678E+05) (X(28) .8619331E+01) (X(25) .1442844E+08) (X(20) .1771076E+02) (X(14) .4043889E+00) (X(30) .3189213E+05)
 (DT .2682827E+02) (X(15) .2861932E+04) (X(43) .3284588E+04) (X(21) .6526506E+05) (X(47) .7821608E+06) (X(31) .7465061E+05)
 (X(42) .1670125E+04) (X(46) .3724882E+06) (X(36) .1426390E+07) (MACH .3799314E+00)

TABLE OF MEANS (TOTAL)

VARIABLE	MEAN
X(7)	3197138E+01
X(19)	1434204E+03
DC	5584416E+02
X(8)	6622230E+02
X(6)	1282590E+01
X(16)	1010545E+01
X(26)	8680547E+01
X(10)	1234771E+04
X(8)	3214700E+00
X(27)	2101615E+02
X(11)	1214935E+05
X(23)	3385508E+05
X(13)	1086115E+05
X(28)	2611704E+01
X(25)	1491852E+08
X(20)	1799504E+02
X(14)	4172980E+00
X(30)	1325478E+05
DT	8135065E+01
X(15)	3206520E+04
X(43)	8881271E+03
X(21)	6800608E+05
X(47)	1955490E+06
X(51)	3041080E+05
X(42)	4796213E+03
X(46)	1034290E+06
X(36)	597984E+04
MACH	3932728E+00

CORRELATION MATRIX FOR TOTAL

	X(7)	X(19)	DC	X(8)	X(6)	X(16)	X(26)	X(10)
X(7)	1000000E+01	1480884E+00	-1481202E+00	3913292E-01	8955821E+00	9881686E+00	2742821E-01	-3284092E+00
X(19)	1480884E+00	1000000E+01	7415836E+00	8141846E+00	-936631E+00	1640656E+00	-018020E-01	-317798E+00
DC	-1481202E+00	7415836E+00	1000000E+01	8853786E+00	-9928506E-01	-1307539E+00	-2279256E-01	-1106441E-01
X(8)	3913292E-01	8141846E+00	8853786E+00	1000000E+01	1334999E+00	5047538E-01	-1054992E-02	-694595E-01
X(6)	8955821E+00	-936631E+00	-9928506E-01	1334999E+00	1000000E+01	6586355E+00	4328348E-01	-2208000E+00
X(16)	9881686E+00	1640656E+00	-1307539E+00	5047538E-01	6586355E+00	1000000E+01	3105791E-01	-4111000E+00
X(26)	2742821E-01	-018020E-01	-2279256E-01	-1054992E-02	9328348E-01	3105791E-01	1000000E+01	-3868819E-01
X(10)	-3284092E+00	-317798E+00	-1106441E-01	-694595E-01	-2208000E+00	-4111000E+00	-2869819E-01	1000000E+01
X(8)	3439838E+00	1405634E+00	1146294E-01	7143674E-01	2219569E+00	4484078E+00	3284896E-01	9247761E+00
X(27)	9502953E-01	4548974E-02	-3728851E-01	-1021251E-01	1294270E+00	1019863E+00	9400533E+00	-7624951E-01
X(11)	-1290592E+00	8488771E+00	9090107E+00	7924525E+00	-8822445E-01	-1141613E+00	-2252292E-01	-6084733E-02
X(23)	3183151E+00	8828874E+00	6293879E+00	8238308E+00	3381647E+00	3294442E+00	-2580000E-01	-1727644E+00
X(13)	1086115E+05	3657701E-01	4444767E-02	2087948E-01	5818818E-01	7635770E-01	7874020E+00	-567992E-02
X(28)	2611704E+01	3103896E-01	4369217E-02	-1774361E-01	-5389218E-01	-7133782E-01	6052939E+00	-4478658E-01
X(25)	1491852E+08	3161413E+00	6632666E+00	5048309E+00	-1644912E+00	2488589E+00	-4487503E-01	-4148643E+00
X(20)	1799504E+02	7708620E+00	9900639E+00	8928768E+00	-8035901E-01	9928599E-01	-1896218E-01	-7624777E-01
X(14)	4172980E+00	2189178E+00	8447237E-01	1424490E+00	9657840E+00	9195787E+00	9354918E-01	-4151484E+00
X(30)	9423868E-01	7751882E-03	-2866290E-01	6082744E-02	-1584230E+00	9842038E-01	8825721E+00	-5776039E-01
DT	8973136E-01	-3786118E-01	-5931092E-02	-2232605E-01	6557288E-01	9124090E-01	8997869E+00	-8336950E-03
X(15)	4808450E+00	-3159227E-01	-1893866E+00	-5818895E-01	5813097E+00	-3577079E+00	-1920303E-01	-4625856E+00
X(43)	2053448E-02	-1817560E+00	-1955990E+00	2185785E+00	-3206213E-01	9830089E-02	3822347E+00	-552201E-01
X(21)	6800608E+05	4062779E+00	7625072E+00	6013149E+00	-1588282E+00	-227418E+00	-8114109E-01	-3154028E+00
X(47)	1955490E+06	1242115E+00	1471377E+00	1642355E+00	4474338E-01	-1311451E-01	-5550746E+00	-5282377E-01
X(51)	3041080E+05	7171679E-02	-5476717E-01	-102716E-01	-2236040E+00	-2173335E+00	8282974E+00	-1150480E+00
X(42)	4796213E+03	-1920899E+00	-2638442E+00	-2655262E+00	-1257994E-01	-2524602E-01	-4271604E+00	-4048974E-01
X(46)	1034290E+06	1337700E+00	2112515E+00	2097499E+00	2021047E-01	-2856147E-01	-5683933E+00	-3378607E-01
X(36)	-1023077E+00	-2370577E+00	-4130256E+00	-3328819E+00	-7374628E-01	-1150708E-01	-3202090E+00	-1097906E-01
MACH	3932728E+00	-3017087E+00	-5874965E+00	-4189496E+00	-7718204E+00	-7526158E+00	-5748248E-01	7503011E-02

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	X(42)	X(46)	X(26)	MACH
X(7)	-1826802E-06	-3497489E-08	-4820308E-09	-1258247E-03
X(19)	-1666798E-09	-2093391E-11	-1641698E-12	-6870245E-04
DC	-5901661E-08	-8281278E-10	-7611658E-11	-3466487E-04
X(18)	-8245830E-08	-1141680E-11	-8292394E-11	-3415835E-04
X(6)	-1694865E-05	-4772072E-07	-7970877E-08	-2742338E-02
X(16)	-531218E-05	-1057022E-08	-1550256E-09	-4192448E-02
X(28)	-2830865E-08	-6901164E-10	-1702235E-11	-1006832E-03
X(10)	-6594521E-08	-1256195E-11	-1668435E-11	-4201196E-03
X(8)	-2720115E-04	-3335584E-06	-3357811E-06	-3328223E-01
X(27)	-6382228E-08	-1597087E-11	-3317939E-11	-2784135E-02
X(11)	-8241867E-10	-1447093E-13	-1100148E-14	-4790499E-06
X(23)	-1991300E-11	-3221480E-13	-2075684E-14	-3128288E-06
X(13)	-1746955E-11	-3953890E-13	-1748892E-14	-2001088E-06
X(28)	-6508061E-07	-1466631E-10	-4933482E-10	-7125788E-02
X(25)	-8132088E-10	-1422565E-18	-1351111E-17	-5819308E-08
X(20)	-1928980E-08	-2708161E-10	-2376661E-11	-1112775E-04
X(14)	-9549112E-04	-1990630E-07	-2479315E-08	-893785E-01
X(30)	-2466889E-11	-5750828E-12	-7910703E-14	-1262348E-05
DT	-1983101E-08	-4488457E-10	-1531271E-11	-2195274E-03
X(15)	-4837819E-09	-7201367E-11	-6218487E-12	-1217902E-06
X(43)	-1731670E-11	-2707496E-13	-8742041E-13	-6924338E-05
X(21)	-6066037E-11	-8225837E-13	-9071681E-14	-4314064E-07
X(47)	-2704010E-13	-5190782E-15	-1528866E-16	-9344784E-07
X(31)	-5338804E-11	-1335877E-14	-357678E-14	-5177161E-06
X(42)	-7194988E-10	-1153694E-13	-4598041E-13	-3761398E-05
X(48)	-1152894E-13	-2209933E-15	-7438717E-15	-5678745E-07
X(44)	-4588041E-13	-7439717E-15	-4630851E-16	-4896208E-08
MACH	-3761398E-05	-5678746E-07	-4698204E-08	-5006711E-01

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SUMS OF SQUARES AND CROSS PRODUCT MATRIX FOR TREATMENT.

	X(7)	X(19)	DC	X(18)	X(6)	X(16)	X(28)	X(10)
X(7)	-4399830E+02	-2631543E+04	-1705825E+03	-6197610E+03	-6683178E+01	-1474655E+02	-4164258E+04	-1375818E+04
X(19)	-2631543E+04	-1573892E+06	-1020232E+05	-3706712E+05	-3997124E+03	-6819724E+03	-2490651E+08	-822859E+05
DC	-1705825E+03	-1020232E+05	-6613376E+03	-2402774E+04	-2591028E+02	-5717142E+02	-1614498E+05	-5333661E+04
X(18)	-6197610E+03	-3706712E+05	-2402774E+04	-8729769E+04	-9413725E+02	-2077155E+03	-5865792E+05	-1937937E+05
X(6)	-6683178E+01	-3997124E+03	-2591028E+02	-9413725E+02	-1015127E+01	-2239895E+01	-6325363E+03	-2089768E+03
X(16)	-1474655E+02	-6819724E+03	-5717142E+02	-2077155E+03	-2239895E+01	-4842368E+01	-1395792E+04	-4611112E+03
X(28)	-4164258E+04	-2490651E+08	-1614498E+05	-5865792E+05	-6325363E+03	-1395792E+04	-3841401E+08	-1302158E+08
X(10)	-1375818E+04	-822859E+05	-5333661E+04	-1937937E+05	-2089768E+03	-4611112E+03	-1302158E+08	-4302060E+05
X(8)	-8594537E+01	-5140284E+01	-3332048E+00	-1210601E+01	-1305444E+01	-2880495E+01	-8134388E+01	-2687434E+01
X(27)	-1012181E+05	-6059589E+08	-3927962E+05	-1427109E+06	-1338919E+04	-3395652E+04	-9589169E+06	-3168044E+06
X(11)	-4814217E+05	-2879322E+07	-186442E+06	-6781183E+06	-7312451E+04	-1613505E+05	-4556466E+07	-1505362E+07
X(23)	-6880082E+06	-4114890E+08	-2667384E+07	-9691079E+07	-1045033E+06	-2305888E+08	-6511725E+08	-2151340E+08
X(13)	-2647731E+07	-1582575E+09	-1026599E+08	-3729515E+08	-4021714E+06	-8973980E+06	-2505972E+09	-8279216E+08
X(28)	-1066748E+04	-8344200E+09	-4112453E+04	-1494138E+05	-1611200E+03	-3555141E+03	-1003956E+06	-3316863E+05
X(25)	-8617888E+08	-5154248E+10	-3241100E+08	-1213890E+10	-1308995E+08	-288920E+08	-8154487E+10	-2694735E+10
X(20)	-5020044E+02	-300425E+04	-1846259E+03	-7071846E+03	-7625087E+01	-1682488E+02	-4751272E+04	-1589722E+04
X(14)	-2279506E+01	-136344E+03	-8837501E+01	-3210844E+02	-3462406E+00	-7639858E+00	-2157462E+02	-7127810E+02
X(30)	-3280738E+07	-1968148E+09	-1275798E+08	-4635235E+08	-4989385E+06	-1102904E+07	-3114553E+08	-1028894E+08
DT	-3300777E+04	-1974152E+04	-1279890E+05	-4648376E+05	-5013644E+03	-1106269E+04	-324055E+08	-1022123E+06
X(15)	-4318613E+05	-2582908E+07	-1674298E+06	-6083089E+06	-6559663E+04	-1447401E+05	-4087366E+07	-1350391E+07
X(43)	-4407905E+08	-2638312E+08	-1708917E+07	-620884E+08	-6695291E+05	-1477327E+06	-4171907E+08	-378312E+08
X(21)	-4829737E+08	-2994586E+08	-1878335E+07	-6817199E+07	-7351213E+05	-1622058E+06	-4580619E+08	-1513242E+08
X(47)	-1053419E+09	-6300345E+10	-4088438E+09	-1483914E+10	-1600068E+08	-3530578E+08	-9970191E+10	-3293945E+10
X(31)	-7911295E+07	-4671831E+09	-3028386E+08	-1106274E+09	-1186478E+07	-2617995E+07	-7383072E+09	-2442518E+08
X(42)	-2109088E+08	-1261425E+08	-8176842E+06	-2976813E+07	-320558E+05	-7088731E+05	-1996179E+08	-6594861E+07
X(48)	-4750825E+08	-2841410E+10	-1641868E+09	-6891894E+09	-7218175E+07	-1582382E+08	-448477E+10	-1485842E+10
X(44)	-1462717E+09	-8748225E+10	-5870812E+09	-2068338E+10	-2221762E+08	-4802354E+08	-1384404E+11	-4573798E+10
MACH	-2355607E+01	-1408859E+03	-9123540E+01	-3318038E+02	-3577998E+00	-788491E+00	-2228488E+03	-7365771E+02

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Table with columns X(8), X(27), X(11), X(23), X(13), X(28), X(25), X(20) and rows of numerical data including labels like X(7), X(19), DC, X(18), X(6), X(16), X(26), X(10), X(8), X(27), X(11), X(23), X(13), X(28), X(25), X(20), DT, X(15), X(42), X(21), X(47), X(17), X(42), X(44), X(36), MACH.

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Table with columns X(14), X(30), DT, X(15), X(43), X(21), X(47), X(31) and rows of numerical data including labels like X(7), X(19), DC, X(18), X(6), X(16), X(26), X(10), X(8), X(27), X(11), X(23), X(13), X(28), X(25), X(20), DT, X(15), X(42), X(21), X(47), X(17), X(42), X(44), X(36), MACH.

Table with 5 columns: X(42), X(46), X(36), and MACH, followed by rows of numerical data in scientific notation.

SUMS OF SQUARES AND CROSS PRODUCT MATRIX FOR ERROR.

Large table with 11 columns: X(7), X(9), DC, X(18), X(6), X(16), X(26), X(10). Rows contain numerical data in scientific notation, ending with MACH.

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	X(42)	X(44)	X(36)	MACH
X(7)	182288E+05	1253346E+08	3357589E+09	1234691E+03
X(19)	1792941E+09	2383332E+11	1729178E+12	7011131E+04
DC	5883430E+08	8465464E+10	7468366E+11	3475619E+04
X(18)	8542511E+06	1208599E+11	8499428E+11	3448816E+04
X(6)	4896434E+05	1198825E+08	5749215E+08	2706558E+02
X(16)	1737513E+05	5352298E+07	1080020E+09	4113499E+02
X(24)	8244867E-07	2104688E+10	3179354E+10	1224656E-03
X(10)	9254017E+08	1404750E+11	2327013E+11	4837775E-03
X(8)	3132083E+04	4263581E+06	6214788E+06	3783852E-01
X(27)	1535659E+08	5031334E+10	5032342E+09	5702813E+03
X(11)	8472636E+10	1499074E+13	1118173E+14	4818273E+08
X(23)	2321085E+11	4064335E+13	2304406E+14	3488630E+05
X(13)	4777689E+10	1094998E+13	869774E+13	5835619E+05
X(28)	1423384E+07	3212861E+09	1407121E+10	1446821E+02
X(25)	8546163E+13	1516617E+16	1376760E+17	5965447E+09
X(20)	1953044E+08	2762365E+10	2392350E+11	1115462E+04
X(14)	2049168E+05	4451932E+07	1720714E+08	8815947E+01
X(30)	8894766E+10	2197856E+13	8167273E+13	1887999E+06
DT	4008798E+07	9254347E+09	4339578E+10	4281239E+02
X(5)	2767700E+08	2538335E+11	4783804E+12	1194797E+06
X(43)	1520378E+11	2231552E+13	8278673E+13	4584662E+05
X(12)	6280292E+11	8748408E+13	9232574E+14	4339874E+07
X(47)	2201054E+13	4053330E+15	1178668E+16	3705056E+07
X(31)	1584478E+11	4924512E+13	9768867E+13	9359138E+06
X(42)	6184006E+10	9259635E+12	3896890E+13	2632240E+05
X(46)	9259635E+12	1896940E+15	5859345E+15	3135273E+07
X(38)	3896890E+13	5859345E+15	4144584E+16	3913104E+08
MACH	2632240E+05	3135273E+07	3913104E+08	4880598E+01

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INVERSE OF THE COVARIATES
CROSS PRODUCT MATRIX
FOR TOTAL.

	X(7)	X(18)	DC	X(18)	X(6)	X(18)	X(28)	X(10)
X(7)	1805890E+00	1279419E-05	5925235E-03	2750268E-04	1942312E+00	4842312E+00	1440138E-04	5546244E-04
X(18)	1279419E-05	2585973E-06	9854195E-07	5194270E-06	4290104E-04	1736215E-06	457174E-07	4025170E-08
DC	5925235E-03	9854195E-07	1012270E-03	3284381E-05	9627741E-04	1688349E-02	3208796E-02	7436685E-06
X(6)	2750268E-04	5194270E-06	3284381E-05	2605884E-05	2644107E-03	8310428E-05	1505982E-05	1002404E-07
X(16)	1942312E+00	4290104E-04	9627741E-04	2644107E-03	1803878E+01	6585945E+00	1451508E-03	4658693E-04
X(18)	4842312E+00	1736215E-06	1688349E-02	8310428E-05	1328363E+01	1432170E-03	1432170E-03	1399136E-03
X(26)	1440138E-04	457174E-07	3208796E-05	1505982E-05	1451508E-03	1432170E-03	2490385E-02	2602809E-07
X(10)	5546244E-04	4025170E-08	7436685E-06	1002404E-07	4838893E-04	7399138E-03	2602809E-07	3894235E-07
X(8)	9284808E+00	1292375E-03	1888038E-01	3260747E-03	3746425E+01	2128813E+01	1423328E-02	886032E-03
X(27)	1413863E-04	2895961E-07	7849810E-08	3357275E-04	3273489E-05	1509588E-04	5350643E-04	6715670E-08
X(11)	9519818E-07	3854478E-04	3207189E-07	8200140E-09	1735258E-06	4099582E-07	6189558E-08	2426743E-09
X(23)	2432146E-07	8087183E-08	5003528E-08	4026358E-09	6895661E-07	2291904E-07	1509494E-08	1510686E-10
X(13)	8345605E-07	4068999E-10	4102250E-09	4016238E-09	5416500E-06	4999505E-08	1174147E-06	1022385E-11
X(28)	2082868E-02	1746873E-04	8283262E-05	1945898E-05	5805108E-02	1755696E-02	7778316E-04	4218897E-06
X(25)	1362072E-10	7044569E-12	1134631E-10	2238820E-12	2312311E-09	7497598E-11	1349461E-11	1528189E-12
X(20)	1649435E-02	1316328E-05	2543258E-03	4884622E-05	5086029E-03	4550925E-02	2862484E-05	2023300E-05
X(14)	5878594E+00	8307761E-04	1700244E-03	3643210E-03	5389496E+01	2001114E+01	1107184E-02	1380910E-03
X(30)	1558744E-06	3328702E-10	1374925E-08	2988680E-09	888141E-06	5131748E-07	2013776E-09	257394E-11
DT	7822594E-04	9088283E-07	2199489E-05	6153305E-06	1809897E-02	4940535E-03	1688593E-03	1284001E-04
X(15)	1721561E-04	3432308E-08	8161982E-07	5484424E-09	3676145E-04	4108211E-04	5593914E-08	9322185E-08
X(43)	1778838E-06	3710946E-04	1122072E-07	5312621E-08	9949162E-07	5276380E-08	4715036E-07	7964528E-10
X(21)	7114305E-07	1016373E-09	1191559E-07	8957122E-10	1261640E-07	1846019E-06	6211459E-11	7768946E-10
X(47)	7281903E-09	1642856E-10	7742801E-10	3209327E-11	1480189E-09	3280999E-08	5916018E-09	5343479E-12
X(31)	4249646E-07	5437438E-11	4033966E-08	1182452E-09	2004182E-08	1469162E-07	4272260E-07	4480989E-12
X(42)	8126074E-06	1119125E-07	2988046E-07	2404051E-07	8842105E-06	1421895E-05	4950622E-07	2080179E-09
X(46)	1193123E-08	4147775E-10	2435943E-09	8352884E-11	2354807E-08	6036781E-08	1573735E-08	1220782E-11
X(36)	1732726E-08	1439420E-11	1224284E-10	7082729E-10	5927904E-09	3139213E-09	9924644E-10	2632877E-13

	X(42)	X(46)	X(36)
X(7)	-6136074E-06	-1193123E-08	-1732726E-09
X(19)	-1119125E-07	-6147775E-10	-1439430E-11
DC	-2998046E-07	-2435943E-08	-1224284E-10
X(18)	-2404051E-07	-8352884E-11	-1063728E-10
X(6)	-8842105E-06	-2354807E-08	-5927904E-09
X(16)	-1421895E-05	-6036781E-08	-3139213E-09
X(28)	-4950622E-07	-1373775E-09	-9924844E-10
X(10)	-2090179E-09	-1220242E-11	-2832877E-13
X(8)	-2718235E-05	-2036810E-07	-1150451E-09
X(27)	-3260070E-07	-5643495E-09	-2331979E-10
X(11)	-2228490E-09	-1560272E-11	-7408234E-14
X(23)	-3613872E-10	-2549386E-12	-1543452E-14
X(13)	-7454160E-10	-6085509E-14	-6791791E-13
X(28)	-3202090E-07	-1835654E-09	-3872852E-11
X(25)	-3081990E-13	-1482772E-15	-4772593E-17
X(20)	-2560216E-07	-2507077E-10	-5945417E-11
X(4)	-6700193E-06	-6882488E-08	-1907301E-09
X(30)	-8397926E-11	-9851525E-12	-2732520E-13
DT	-2215442E-07	-1985992E-10	-1704882E-11
X(15)	-8248073E-10	-2273242E-12	-1860985E-13
X(43)	-3434503E-08	-1805828E-10	-1885821E-12
X(21)	-3466645E-11	-2320057E-13	-2866227E-15
X(47)	-1789528E-10	-1244938E-12	-2718605E-15
X(31)	-4103278E-11	-5377682E-13	-1275584E-13
X(42)	-1102816E-07	-5377054E-10	-1185524E-11
X(46)	-5377054E-10	-3655458E-12	-6275740E-15
X(36)	-1185524E-11	-4275740E-15	-1372471E-14

INVERSE OF THE COVARIATES
CROSS-PRODUCT MATRIX
FOR TREATMENT.

	X(7)	X(19)	DC	X(18)	X(6)	X(16)	X(26)	X(10)
X(7)	-4959632E-12	-9370779E-10	-6751082E-10	-4308199E-11	-3702278E-12	-6963063E-12	-2264707E-11	-5631567E-09
X(19)	-3233487E-09	-8681509E-07	-1566525E-08	-4402842E-09	-5107531E-09	-1141160E-10	-2198030E-08	-4033542E-06
DC	-8810364E-10	-1210489E-09	-1186030E-09	-3600272E-09	-5681285E-10	-7824260E-10	-2540004E-09	-7918538E-07
X(18)	-1254264E-11	-2390401E-09	-1688891E-09	-1097145E-10	-8497492E-10	-1801009E-11	-6199537E-09	-1490847E-08
X(6)	-5878872E-12	-1169100E-11	-9555249E-10	-5378849E-11	-4645040E-12	-8968891E-12	-2892634E-11	-8901851E-09
X(16)	-2529721E-12	-8843509E-11	-3907859E-11	-2286019E-12	-1801771E-12	-3777301E-12	-1203865E-12	-3002358E-10
X(26)	-7710480E-11	-1474598E-10	-1108272E-10	-7888124E-10	-5328809E-11	-1112331E-12	-3562238E-10	-9138234E-08
X(10)	-3594548E-09	-1082682E-08	-8445522E-07	-5044428E-08	-4201482E-09	-8307636E-09	-2457267E-08	-7191077E-06
X(8)	-1336406E-12	-2542144E-11	-2890783E-11	-1278382E-12	-1068475E-13	-2118880E-13	-5280607E-11	-1704932E-10
X(27)	-1589750E-11	-3171459E-09	-2183715E-09	-1423343E-10	-1103599E-11	-2344621E-11	-8267661E-09	-1967492E-08
X(11)	-2672904E-08	-7140526E-06	-6315862E-06	-2281984E-07	-3057918E-08	-4946337E-08	-1580288E-07	-4839049E-05
X(23)	-6028660E-08	-1163715E-07	-9316048E-06	-5420859E-07	-4531525E-08	-9098721E-08	-2961091E-07	-7216719E-05
X(13)	-1036238E-08	-2173259E-06	-2375033E-06	-1046940E-07	-7888641E-07	-1802844E-08	-6409503E-06	-1849801E-05
X(28)	-8738841E-10	-8481228E-08	-1439931E-09	-4891823E-09	-1070790E-11	-7058914E-10	-2341934E-09	-5464351E-07
X(25)	-4759805E-05	-8770111E-03	-583231E-03	-3834083E-04	-3788490E-05	-5581741E-05	-1974241E-04	-5403432E-02
X(20)	-4287939E-11	-8349143E-09	-5896187E-09	-2851893E-10	-3052838E-11	-6214007E-11	-2283720E-10	-5342574E-08
X(14)	-3340232E-12	-6288123E-11	-5120345E-11	-3006918E-12	-2468013E-13	-4835647E-13	-1584404E-12	-3827845E-10
X(30)	-1626785E-08	-3788844E-06	-3074939E-06	-1575379E-07	-1175718E-08	-2618405E-08	-7868281E-06	-1986577E-05
DT	-1947044E-11	-3898681E-09	-3793511E-09	-1830013E-10	-1522503E-11	-2818127E-11	-8537568E-09	-2328063E-08
X(15)	-2389900E-09	-4421717E-07	-3470824E-07	-2164803E-08	-1820521E-09	-3664334E-09	-1252011E-08	-2880767E-06
X(43)	-8272217E-09	-1600518E-08	-1196221E-08	-7361415E-08	-6066439E-09	-1208814E-10	-3825663E-08	-9788237E-06
X(21)	-8965436E-07	-1242574E-06	-8424481E-05	-5502748E-08	-5448783E-07	-8655013E-07	-2587335E-06	-7871997E-04
X(47)	-4138924E-06	-8037883E-04	-7445428E-04	-3494618E-05	-3788678E-06	-3907581E-06	-1868593E-05	-4199254E-03
X(31)	-1844810E-08	-3142828E-05	-2249955E-05	-1453845E-07	-1184542E-08	-2331717E-08	-7886120E-06	-1953393E-05
X(42)	-8671335E-05	-1573790E-03	-1302039E-03	-7338982E-05	-5526844E-05	-1259853E-05	-4115820E-04	-8998532E-03
X(46)	-8211904E-06	-1531389E-05	-1416787E-05	-7388087E-05	-5945546E-06	-1577289E-07	-2882801E-05	-7993167E-03
X(36)	-4738979E-06	-9222122E-04	-7862371E-04	-4514208E-05	-3240098E-06	-8018888E-06	-2425874E-05	-6092046E-03

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	X(42)	X(48)	X(36)
X(7)	.5202584E+08	.1322611E+07	.3432976E+04
X(19)	.1808255E+05	.2090071E+04	.2482850E+03
DC	.7058588E+07	.1590024E+05	.4055170E+04
X(18)	.1449920E+08	.2931289E+05	.8907876E+04
X(6)	.6446670E+09	.1528331E+07	.4534332E+06
X(16)	.2739679E+10	.6384681E+07	.2007430E+07
X(26)	.8486161E+08	.2012106E+06	.6129098E+05
X(10)	.6201814E+08	.1304492E+04	.3908419E+03
X(8)	.1110012E+10	.4592295E+07	.5892794E+06
X(27)	.1817644E+08	.4142539E+05	.1332584E+05
X(11)	.3523132E+05	.1080656E+03	.2519778E+02
X(23)	.6737077E+05	.1486793E+03	.4723610E+02
X(13)	.1531480E+05	.1629166E+02	.9853841E+01
X(28)	.3457900E+07	.3218072E+05	.8740409E+04
X(25)	.5172614E+02	.9999324E+01	.3307956E+01
X(20)	.5278599E+08	.9876506E+05	.3514316E+05
X(14)	.3661068E+10	.8525088E+07	.2469462E+07
X(30)	.1732716E+05	.4037576E+02	.1110507E+02
DT	.2555583E+08	.5860480E+05	.1488821E+05
X(15)	.2708934E+06	.8250042E+03	.1853857E+03
X(43)	.8083275E+06	.2071217E+04	.6570005E+03
X(21)	.6555778E+04	.1796493E+02	.4481834E+01
X(47)	.5576205E+03	.7558886E+00	.1977167E+00
X(31)	.1563852E+05	.4639033E+02	.1286507E+02
X(42)	.8223798E+06	.2115641E+04	.6767175E+03
X(46)	.7045472E+03	.3169200E+01	.5457477E+00
X(36)	.5086152E+03	.1343408E+01	.3421887E+00

INVERSE OF THE COVARIATES
CROSS PRODUCT MATRIX
FOR ERROR.

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	X(7)	X(19)	DC	X(18)	X(6)	X(16)	X(26)	X(10)
X(7)	.1805863E+00	.1239565E+05	.5827254E+03	.2751055E+04	.1941942E+00	.4842619E+00	.1688378E+04	.5544682E+04
X(19)	.1239565E+05	.2586893E+06	.9900797E+07	.5184088E+06	.4288428E+04	.2444298E+06	.5144130E+07	.4045289E+08
DC	.5827254E+03	.9900797E+07	.1012294E+03	.3284289E+05	.9670832E+04	.1688728E+02	.3237822E+05	.7437198E+06
X(18)	.2751055E+04	.5184088E+06	.3284289E+05	.2605887E+05	.2643839E+03	.8324424E+05	.1504850E+05	.1002204E+07
X(6)	.1941942E+00	.4298629E+04	.9670832E+04	.2643839E+03	.1804058E+01	.6595289E+00	.1504610E+03	.4659630E+04
X(16)	.4842619E+00	.2444298E+06	.1688728E+02	.8324424E+05	.6585288E+00	.1328418E+01	.1389060E+03	.1398214E+03
X(26)	.1688378E+04	.5144130E+07	.3237822E+05	.1504850E+05	.1504610E+03	.1389060E+03	.2492953E+03	.2685838E+07
X(10)	.5544682E+04	.4045289E+08	.7437198E+06	.1002204E+07	.4659630E+04	.1398214E+03	.2685838E+07	.3884368E+07
X(8)	.9286421E+00	.1296099E+03	.1888227E+01	.5260011E+03	.3740870E+01	.2128900E+01	.1486526E+02	.8960793E+03
X(27)	.1498853E+04	.2489798E+07	.7949188E+06	.3353398E+06	.1455433E+05	.1358588E+04	.5362842E+04	.6931454E+08
X(11)	.9572305E+07	.3655694E+08	.3306553E+07	.8202544E+06	.3723988E+06	.4005873E+07	.6092813E+08	.2428101E+09
X(23)	.2459315E+07	.8103854E+09	.5000352E+08	.4027598E+09	.6637542E+07	.2243827E+07	.1470436E+08	.1517504E+09
X(13)	.7685311E+07	.9593005E+10	.4874331E+09	.5986118E+09	.5557746E+06	.6733390E+08	.1144655E+08	.6540583E+12
X(28)	.2108838E+03	.1689242E+06	.8354065E+05	.1947037E+05	.5598767E+02	.1760133E+02	.7814213E+04	.4212647E+06
X(25)	.1362128E+10	.7644581E+12	.1134630E+10	.2238822E+12	.2312300E+09	.7496638E+11	.1349339E+11	.1528190E+12
X(20)	.1650180E+02	.1318046E+05	.2543345E+03	.4884282E+05	.5070985E+03	.4582249E+02	.2989836E+05	.2023489E+05
X(14)	.6776130E+00	.8258010E+04	.1884839E+03	.3442672E+03	.5389749E+01	.2000904E+01	.1124157E+02	.1381210E+03
X(30)	.1577080E+04	.3751819E+10	.1358376E+08	.2881316E+09	.8841817E+04	.4809822E+07	.2016412E+08	.2108392E+11
DT	.5718217E+04	.1384532E+06	.2445532E+05	.6057315E+06	.1855003E+02	.4666404E+03	.1638331E+03	.1338030E+04
X(15)	.1722688E+04	.3531054E+09	.8168885E+07	.5462472E+08	.3637080E+04	.4108871E+04	.6208870E+08	.9323271E+08
X(43)	.1760712E+06	.3734668E+08	.1120186E+07	.5311885E+08	.1031412E+06	.5247725E+06	.4691854E+07	.7823586E+10
X(21)	.7118914E+07	.1015771E+09	.1191390E+07	.8959321E+10	.9257221E+07	.1846482E+06	.2460918E+11	.7769608E+10
X(47)	.7168797E+09	.1644982E+10	.7722031E+10	.3205125E+11	.1657217E+09	.3274633E+08	.5802776E+09	.5320094E+12
X(31)	.4339683E+07	.7053960E+11	.4115881E+09	.1178257E+09	.1089186E+06	.1344711E+07	.4282329E+07	.2702776E+12
X(42)	.8105766E+06	.1119825E+07	.2994502E+07	.2403913E+07	.8906938E+06	.1416510E+05	.4907851E+07	.2082484E+09
X(46)	.1187479E+08	.4149880E+10	.2425282E+08	.8350306E+11	.2342713E+08	.6026735E+08	.1572923E+08	.1218827E+11
X(36)	.1714323E+09	.1443678E+11	.1284336E+10	.1063844E+10	.5967270E+09	.3106513E+08	.9951100E+08	.2586154E+13

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	X(42)	X(46)	X(36)
X(7)	-6105786E-06	-1187470E-08	-1714322E-09
X(19)	-118825E-07	-418000E-10	-1443878E-11
DC	-2984502E-07	-2435282E-09	-128436E-10
X(18)	-2403813E-07	-8350306E-11	-1063644E-10
X(6)	-8506938E-08	-2342713E-08	-5967270E-09
X(16)	-1414510E-05	-6026735E-08	-3106513E-09
X(26)	-4807051E-07	-1572923E-08	-8951100E-10
X(10)	-2082484E-08	-1218827E-11	-2586154E-13
X(8)	-2688502E-05	-2031627E-07	-9784788E-10
X(27)	-3245089E-07	-5640712E-08	-2341037E-10
X(11)	-2229404E-09	-1560445E-11	-7352033E-14
X(23)	-3618641E-10	-2550285E-12	-1514687E-14
X(13)	-7570084E-10	-2923600E-14	-6882162E-13
X(28)	-3258263E-07	-1843829E-09	-360837E-11
X(25)	-3081880E-13	-1482770E-15	-4772535E-17
X(20)	-2547134E-07	-2482673E-10	-5865882E-11
X(14)	-6492971E-06	-6643843E-08	-2033124E-09
X(30)	-8918770E-11	-9781488E-12	-2793072E-12
DT	-2584804E-07	-1286984E-10	-5378614E-12
X(15)	-8172980E-10	-2258234E-12	-1815389E-13
X(43)	-343786E-08	-1805882E-10	-1887535E-12
X(21)	-3471224E-11	-2220911E-13	-2894031E-15
X(47)	-1788647E-10	-1244846E-12	-270788E-15
X(37)	-4226208E-11	-5254761E-13	-123040E-12
X(42)	-1102869E-07	-5377153E-10	-1185847E-11
X(46)	-5377153E-10	-3655478E-12	-6269715E-15
X(36)	-1185847E-11	-6269715E-15	-1172667E-14

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ANALYSIS OF COVARIANCE TABLE

SOURCE	DF	VV	SUM-SQUARES (DUE)	SUM-SQUARES (ABOUT)	DF	MEAN-SQUARE
TREATMENT (BETWEEN)	1	.1261130E+00				
ERROR (WITHIN)	741	.4880598E+01	.4872293E+01	.8304637E+02	741	.1120734E+04
TREATMENT + ERROR (TOTAL)	742	.5006711E+01	.4988291E+01	.8419328E+02	742	.1134680E+04
DIFFERENCE FOR TESTING ADJUSTED TREATMENT MEANS	1			.1146886E+03	1	.1146886E+03

NULL HYPOTHESIS: NO DIFFERENCE AMONG TREATMENTS AFTER ADJUSTING WITH COVARIATES.

F(1, 741) = 10.223

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TABLE OF COEFFICIENTS, STANDARD ERRORS AND COMPUTED T-VALUES

TREATMENT (BETWEEN)				
	COEFFICIENT	STAND. ERROR	T-VALUE	CONFIDENCE
X(7)	-.493750000E+01	.754197006E+04	-.00065	50.02064
X(18)	.459289550E-02			
DC	-.678710937E-01	.115641827E+03	-.00059	50.01868
X(18)	-.141113281E+00	.354725202E+03	-.00040	50.01266
X(8)	.646875000E-01	.681453384E+04	.00095	50.03022
X(16)	-.281250000E+02			
X(28)	-.847658250E+00			
X(10)	.558146531E-02	.908148889E+01	.00066	50.02097
X(8)	-.149062500E+02			
X(27)	-.168457031E+00			
X(11)	.406265258E-03			
X(27)	.665646672E-02			
X(13)	-.137329101E-03			
X(28)	.438453125E-02	.157136009E+03	.00003	50.00089
X(25)	.485463609E-06	.100946685E-02	.00048	50.01562
X(20)	-.498046875E+00	.789812201E+03	-.00063	50.02007
X(14)	-.380000000E+02	.719375202E+05	.00050	50.01593
X(30)	-.186443328E-03			
DT	.244148625E+00			
X(15)	.278235829E-02	.207556023E+01	.00135	50.04282
X(63)	.854482187E-02	.891195728E+01	.00096	50.03052
X(21)	.655651092E-04	.194300988E+00	.00034	50.01074
X(47)	-.467896451E-05	.157208138E-01	-.00020	50.00947
X(31)	.164895656E-03			
X(42)	.855200195E-02			
X(46)	-.840425413E-05	.190649155E-01	-.00044	50.01403
X(36)	-.552833080E-05			

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TABLE OF COEFFICIENTS, STANDARD ERRORS AND COMPUTED T-VALUES

ERROR (WITHIN)				
	COEFFICIENT	STAND. ERROR	T-VALUE	CONFIDENCE
X(7)	.355539684E-01	.142283528E-02	24.99163	100.00000
X(18)	-.252325464E-04	.170599662E-05	-14.79050	100.00000
DC	-.481327130E-02	.336825116E-04	-14.58701	100.00000
X(18)	-.689745827E-04	.840417049E-05	-12.37482	100.00000
X(8)	.514857031E-01	.448651918E-02	11.45012	100.00000
X(16)	-.415492513E-01	.385850073E-02	-10.76824	100.00000
X(28)	-.524170045E-03	.528883073E-04	-9.91464	100.00000
X(10)	.651918362E-05	.668237507E-06	9.75578	100.00000
X(8)	-.164013387E+00	.178928389E-01	-9.16643	100.00000
X(27)	.102888927E-02	.127021388E-04	8.07465	100.00000
X(11)	.277428795E-06	.481962885E-07	7.83107	100.00000
X(23)	.870894360E-07	.850733704E-08	7.88607	100.00000
X(13)	-.298828469E-06	.379655193E-07	-7.86581	100.00000
X(28)	-.118831345E-02	.171180490E-03	-6.94187	100.00000
X(25)	.151888437E-08	.222677174E-10	6.82146	100.00000
X(20)	.535667181E-03	.874463485E-04	6.12546	100.00000
X(14)	-.768144551E-01	.125896230E-01	-6.55243	100.00000
X(30)	.275977914E-06	.501136655E-07	5.50703	100.00000
DT	.418049609E-03	.682097117E-04	6.04033	100.00000
X(15)	.111408240E-05	.214049213E-06	5.20480	99.99999
X(43)	-.562108334E-04	.117540811E-06	-4.78224	99.99999
X(21)	-.221948209E-07	.504202589E-08	-4.39989	99.99938
X(47)	-.273998348E-08	.732818672E-09	-3.72533	99.99951
X(31)	-.425087882E-07	.119881928E-07	-3.54542	99.97917
X(42)	.110401188E-05	.251571197E-06	3.14022	99.91224
X(46)	-.423434195E-08	.262465018E-08	-2.04200	98.18111
X(36)	.215972475E-09	.114640644E-09	1.88291	97.00157

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TABLE OF COEFFICIENTS, STANDARD ERRORS AND COMPUTED T-VALUES

TREATMENT-ERROR (TOTAL)				
COEFFICIENT	STAND. ERROR	T-VALUE	CONFIDENCE	
X(17)	.3558846890E-01	.1431391022E-02	24.86984	100.00000
X(19)	-.2512982385E-04	.1714274552E-05	-14.64208	100.00000
DC	.490867751E-03	.3289103884E-04	-14.48190	100.00000
X(18)	-.6685428265E-04	.5427827156E-05	-12.29482	100.00000
X(5)	.5158088811E-01	.4524310639E-02	11.40082	100.00000
X(16)	-.4162832686E-01	.3882354165E-02	-10.72244	100.00000
X(28)	.5305676544E-03	.5115815892E-04	-9.98093	100.00000
X(10)	.6530482258E-05	.8723729896E-06	9.71254	100.00000
X(8)	-.1825875262E+00	.1800324762E-01	-9.08706	100.00000
X(27)	.1047558767E-03	.1278236403E-04	8.20819	100.00000
X(11)	.3787865356E-06	.4848335473E-07	7.81110	100.00000
X(23)	.6838924334E-07	.8557286753E-08	7.95823	100.00000
X(13)	-.2816124516E-06	.3782418330E-07	-7.44531	100.00000
X(28)	-.1104748422E-02	.172203775E-02	-6.92692	100.00000
X(25)	.1518870449E-09	.2240583735E-10	6.77935	100.00000
X(20)	.3337462808E-03	.8788989585E-04	6.06601	100.00000
X(14)	-.7711871951E-01	.1587358043E-01	-5.83998	100.00000
X(30)	.2807022514E-04	.5040258252E-07	5.58922	100.00000
07	.3628158090E-03	.6751732022E-04	5.38848	100.00000
X(15)	-.1103057831E-05	.2153490717E-06	-5.12218	99.99998
X(14)	-.5682642552E-06	.1182626572E-06	-4.78819	99.99998
X(21)	-.2225205614E-07	.5073255867E-08	-4.38615	99.99994
X(47)	.2753726771E-08	.7373283211E-09	3.73475	99.98988
X(37)	-.4431177285E-07	.1205019085E-07	-3.67727	99.98736
X(42)	.1111822856E-05	.3537433544E-06	3.14302	99.91307
X(48)	-.4248912295E-08	.2036608650E-08	-2.08627	99.13524
X(38)	.2112287319E-08	.1153426792E-09	1.83133	98.62742

TABLE OF ADJUSTED MEANS AND STANDARD ERRORS

FRIDAY, JUL 2, 1976

TREATMENT NO.	TREATMENT MEAN	ADJUSTED MEAN	SE ADJUSTED
1	.4055491E+00	.3941703E+00	.3054807E-03
2	.3789314E+00	.3922970E+00	.3279592E-03

FRIDAY, JUL 2, 1976

TABLE OF INTERCEPTS

	INTERCEPT * -.5100840011E+01 (BETWEEN)
	INTERCEPT * .3524255916E+00 (TOTAL)
TREATMENT NO.	INTERCEPT (WITHIN)
1	.3522068342E+00
2	.3512335574E+00

FRIDAY, JUL 2, 1976

TABLE OF RESIDUALS (WITHIN)

CASE NO.	Y VALUE	Y ESTIMATE	RESIDUAL	PERCENT VARIATION	GROUP NO.
1	3245000E+00	3121919E+00	1430809E-01	4.50	1
2	3436000E+00	3352483E+00	8251668E-02	2.45	1
3	3605000E+00	3578903E+00	2609731E-02	.75	1
4	3802000E+00	3807274E+00	-5374150E-03	-.14	1
5	4021000E+00	4078981E+00	-4998074E-02	-1.23	1
6	4215000E+00	4078981E+00	-4260534E-02	-.98	1
7	4481000E+00	4357605E+00	-4851279E-03	-.10	1
8	5010000E+00	4994457E+00	-1554285E-02	-.31	1
9	5415000E+00	5342322E+00	-726764E-02	-1.26	1
10	5491000E+00	5414120E+00	-7487999E-02	-1.42	1
11	5504000E+00	5486642E+00	-1725766E-02	-.32	1
12	5501000E+00	5559882E+00	-5888248E-02	-1.06	1
13	5526000E+00	5823824E+00	-978279E-02	-.27	1
14	5288000E+00	3209558E+00	-844211E-02	-1.23	1
15	5488000E+00	3500888E+00	-426808E-02	-.60	1
16	3704000E+00	3781261E+00	-3726138E-02	-1.00	1
17	3989000E+00	4007396E+00	-183611E-02	-.46	1
18	4284000E+00	4300144E+00	-4144030E-03	-.10	1
19	4608000E+00	4618178E+00	-1017793E-02	-.22	1
20	4952000E+00	4980000E+00	-799885E-03	-.16	1
21	3440000E+00	3324243E+00	-1157567E-01	2.17	1
22	5491000E+00	5389674E+00	-912583E-02	-.18	1
23	5493000E+00	5475945E+00	-2305336E-02	-.62	1
24	5493000E+00	5531046E+00	-5404612E-02	-.97	1
25	5549000E+00	5531046E+00	-8187030E-02	-1.46	1
26	3220000E+00	3636875E+00	-5810318E-02	-1.72	1
27	3515000E+00	3536539E+00	-2433893E-02	-.69	1
28	2874000E+00	2878868E+00	-4882290E-03	-.12	1
29	4114000E+00	4096431E+00	-1756896E-02	-.43	1
30	4404000E+00	4401707E+00	-4293099E-03	-.10	1
31	4730000E+00	4729224E+00	-7760901E-04	-.02	1
32	5128000E+00	5088716E+00	-3828437E-02	-.75	1
33	5498000E+00	5466471E+00	-2932974E-02	-.53	1
34	5310000E+00	5548112E+00	-2811255E-02	-1.18	1
35	5561000E+00	5627628E+00	-845855E-02	-.24	1
36	3452000E+00	3527628E+00	-7823430E-02	-2.22	1
37	3728000E+00	3700828E+00	-2717237E-02	-.72	1
38	4011000E+00	3970458E+00	-4054200E-02	-1.02	1
39	4282000E+00	4268152E+00	-1264785E-02	-.29	1
40	4588000E+00	4597826E+00	-288237E-02	-.63	1
41	4841000E+00	4954956E+00	-1396470E-02	-.28	1
42	5441000E+00	5328871E+00	-1021280E-01	1.31	1
43	5490000E+00	5418729E+00	-7127492E-02	-.22	1
44	5303000E+00	5485576E+00	-3423874E-03	-.04	1
45	3818000E+00	3830249E+00	-8738991E-02	-2.45	1
46	3895000E+00	3882811E+00	-1218209E-03	-.31	1
47	4200000E+00	4192922E+00	-2742834E-03	-.07	1
48	4440000E+00	4442637E+00	-363789E-03	-.08	1
49	4890000E+00	4852864E+00	-3864349E-03	-.09	1
50	5252000E+00	5242664E+00	-8936132E-03	-.17	1

NADC-77036-30

FRIDAY, JUL 2, 1976

TABLE OF RESIDUALS (WITHIN)

Table with columns: CASE NO., Y VALUE, Y ESTIMATE, RESIDUAL, PERCENT VARIATION, GROUP NO. (Rows 451-500)

FRIDAY, JUL 2, 1976

TABLE OF RESIDUALS (WITHIN)

Table with columns: CASE NO., Y VALUE, Y ESTIMATE, RESIDUAL, PERCENT VARIATION, GROUP NO. (Rows 501-550)

NADC-77036-30

FRIDAY, JUL 2, 1976

TABLE OF RESIDUALS (WITHIN)

CASE NO.	Y VALUE	Y ESTIMATE	RESIDUAL	PERCENT VARIATION	GROUP NO.
751	.2451000E+00	.2457500E+00	-.6508250E-03	-.18	1
752	.3704000E+00	.3712771E+00	-.8771317E-03	-.24	1
753	.3898000E+00	.3888049E+00	.9951317E-03	.25	1
754	.4062000E+00	.4045293E+00	.1660711E-02	.41	1
755	.2669000E+00	.2678555E+00	-.9554510E-03	-.36	1
756	.2922000E+00	.2916334E+00	.5666454E-03	.19	1
757	.3157000E+00	.3122733E+00	.3426688E-02	1.10	1
758	.3369000E+00	.3354720E+00	.1427991E-02	.43	1
759	.3613000E+00	.3611928E+00	.1071379E-03	.03	1
760	.3897000E+00	.3892716E+00	.4283546E-03	.11	1
761	.3958000E+00	.3951561E+00	.6439020E-03	.16	1
762	.2765000E+00	.2795542E+00	-.3054246E-02	-1.09	1
763	.3034000E+00	.3058508E+00	-.2250781E-02	-.74	1
764	.3298000E+00	.3285282E+00	.1271777E-02	.42	1
765	.3538000E+00	.3543150E+00	-.5149773E-03	-.15	1
766	.3595000E+00	.3598198E+00	-.3197625E-03	-.09	1
767	.3647000E+00	.3654370E+00	-.7269711E-03	-.20	1
768	.3701000E+00	.3711650E+00	-.1069000E-02	-.29	1
769	.3757000E+00	.3770022E+00	-.1302240E-02	-.35	1
770	.3814000E+00	.3829471E+00	-.1547097E-02	-.40	1

FRIDAY, JUL 2, 1976

MAXIMUM RESIDUAL (WITHIN)

CASE NO.	Y VALUE	Y ESTIMATE	RESIDUAL	PERCENT VARIATION	GROUP NO.
576	.5211000E+00	.5040832E+00	.1701479E-01	3.38	1

FRIDAY, JUL 2, 1976

TABLE OF RESIDUALS (TOTAL)

CASE NO.	Y VALUE	Y ESTIMATE	RESIDUAL	PERCENT VARIATION
1	.3265000E+00	.3115803E+00	-.1481571E-01	4.79
2	.3438000E+00	.3246286E+00	-.8970352E-02	2.68
3	.3605000E+00	.3572679E+00	-.3232067E-02	.90
4	.3802000E+00	.3801138E+00	-.8619209E-04	.02
5	.4021000E+00	.4064744E+00	-.4374432E-02	-1.08
6	.4315000E+00	.4251379E+00	-.6378555E-02	-.84
7	.4661000E+00	.4658642E+00	-.2378922E-02	.02
8	.5010000E+00	.4988272E+00	-.2172758E-02	.44
9	.5415000E+00	.5336188E+00	-.7883199E-02	1.48
10	.5818000E+00	.5407972E+00	-.8302759E-02	1.54
11	.5501000E+00	.5480502E+00	-.2348831E-02	.42
12	.5501000E+00	.5553764E+00	-.3274888E-02	-.85
13	.5538000E+00	.5827708E+00	-.8170762E-02	-1.63
14	.3288000E+00	.3203352E+00	-.8466757E-02	2.96
15	.3458000E+00	.3484603E+00	-.3660280E-02	-1.05
16	.3704000E+00	.3734996E+00	-.3099570E-02	-.82
17	.3889000E+00	.4001141E+00	-.1214110E-02	-.30
18	.4286000E+00	.4293807E+00	-.2092792E-03	.05
19	.4608000E+00	.4611965E+00	-.3865211E-03	-.09
20	.4932000E+00	.4953818E+00	-.2183360E-02	-.04
21	.5480000E+00	.5318892E+00	-.1719889E-01	2.29
22	.5491000E+00	.5383531E+00	-.3746882E-02	1.81
23	.5499000E+00	.5468809E+00	-.2918102E-02	.53
24	.5499000E+00	.5546818E+00	-.4791785E-02	-.86
25	.5549000E+00	.5624850E+00	-.7584875E-02	-1.35
26	.3320000E+00	.3257624E+00	-.6237648E-02	1.91
27	.3515000E+00	.3533257E+00	-.1825674E-02	-.52
28	.3814000E+00	.3812588E+00	-.1411544E-03	.04
29	.4114000E+00	.4090162E+00	-.2388311E-02	.58
30	.4405000E+00	.4335450E+00	-.6955042E-02	-.24
31	.4732000E+00	.4722881E+00	-.7019188E-03	-.15
32	.5128000E+00	.5083489E+00	-.4451067E-02	-.88
33	.5489000E+00	.5463263E+00	-.2573686E-02	.65
34	.5510000E+00	.5541908E+00	-.3190846E-02	-.58
35	.5581000E+00	.5621428E+00	-.6042877E-02	-1.07
36	.3453000E+00	.3368458E+00	-.8454194E-02	2.51
37	.3728000E+00	.3694550E+00	-.3345022E-02	-.91
38	.4011000E+00	.3984171E+00	-.2682882E-02	1.18
39	.4282000E+00	.4282844E+00	-.1915821E-02	.45
40	.4568000E+00	.4581488E+00	-.2348786E-02	-.51
41	.4881000E+00	.4848899E+00	-.3258824E-02	-.65
42	.5441000E+00	.5332452E+00	-.1085484E-01	2.04
43	.5490000E+00	.5412296E+00	-.7770358E-02	1.44
44	.5503000E+00	.5493138E+00	-.9862113E-03	.18
45	.2618000E+00	.2524002E+00	-.9399919E-02	2.87
46	.2895000E+00	.2876612E+00	-.1838837E-02	.47
47	.4200000E+00	.4190978E+00	-.9022477E-03	.22
48	.4440000E+00	.4437276E+00	-.2724296E-03	.06
49	.4850000E+00	.4847345E+00	-.2655433E-03	.05
50	.5252000E+00	.5236379E+00	-.1582059E-02	.30

FRIDAY, JUL 2, 1976

TABLE OF RESIDUALS (TOTAL)

CASE NO.	Y VALUE	Y ESTIMATE	RESIDUAL	PERCENT VARIATION
51	.5353000E+00	.5317780E+00	-.3521854E-02	.66
52	.2986000E+00	.2928315E+00	-.5768513E-02	1.87
53	.3170000E+00	.3158508E+00	-.1148248E-02	.36
54	.3345000E+00	.3355070E+00	-.1007038E-02	-.30
55	.3545000E+00	.3555713E+00	-.1071294E-02	-.30
56	.3818000E+00	.3818115E+00	-.1145891E-04	-.00
57	.4181000E+00	.4088175E+00	-.928483E-02	-.19
58	.4375000E+00	.4379286E+00	-.4268077E-03	-.10
59	.4667000E+00	.4673471E+00	-.6471156E-03	-.14
60	.4960000E+00	.4986383E+00	-.2639332E-02	-.73
61	.5029000E+00	.5083073E+00	-.5407324E-02	-.67
62	.5100000E+00	.5130435E+00	-.3043542E-02	-.59
63	.5183000E+00	.5198473E+00	-.1547327E-02	-.30
64	.3038000E+00	.3026538E+00	-.1161462E-02	.31
65	.3272000E+00	.3289143E+00	-.1714253E-02	-.52
66	.3527000E+00	.3510549E+00	-.1645062E-02	.47
67	.3780000E+00	.3757274E+00	-.227551E-02	.55
68	.4018000E+00	.4029666E+00	-.1140618E-02	-.28
69	.4279000E+00	.4326080E+00	-.4708887E-02	-1.09
70	.4579000E+00	.4645211E+00	-.6621088E-02	-1.43
71	.4978000E+00	.4985621E+00	-.7620561E-03	-.15
72	.5044000E+00	.5056151E+00	-.1215137E-02	-.24
73	.5117000E+00	.5127478E+00	-.1047793E-02	-.20
74	.2128000E+00	.2072220E+00	-.5578026E-02	1.82
75	.3360000E+00	.3347727E+00	-.1227332E-02	.37
76	.3615000E+00	.3579533E+00	-.3546714E-02	-.99
77	.2944000E+00	.2937886E+00	-.615987E-03	.18
78	.4101000E+00	.412559E+00	-.245826E-02	-.32
79	.4384000E+00	.4432583E+00	-.4858282E-02	-1.10
80	.4718000E+00	.4768275E+00	-.4727458E-02	-.99
81	.4802000E+00	.4835719E+00	-.3371942E-02	-.70
82	.4891000E+00	.4906042E+00	-.1504235E-02	-.31
83	.4979000E+00	.4977222E+00	-.1786609E-03	.04
84	.5061000E+00	.5049283E+00	-.1171718E-02	.23
85	.5132000E+00	.5122181E+00	-.9918802E-03	.19
86	.2260000E+00	.2197137E+00	-.6284270E-02	1.97
87	.2478000E+00	.2482243E+00	-.4370897E-03	-.28
88	.2727000E+00	.2712888E+00	-.1410174E-02	-.38
89	.2976000E+00	.298215E+00	-.6168418E-03	.12
90	.4267000E+00	.4300360E+00	-.336022E-02	-.78
91	.4596000E+00	.4635887E+00	-.3988688E-02	-.86
92	.4670000E+00	.4706117E+00	-.3611675E-02	-.77
93	.4741000E+00	.4777357E+00	-.3635732E-02	-.76
94	.4822000E+00	.4849596E+00	-.2758605E-02	-.57
95	.4912000E+00	.4922821E+00	-.1082074E-02	-.22
96	.5012000E+00	.4997020E+00	-.1598045E-02	.30
97	.3384000E+00	.3293717E+00	-.9028293E-02	2.74
98	.3632000E+00	.3614281E+00	-.1768778E-02	-.48
99	.3900000E+00	.3897284E+00	-.270616E-03	.33
100	.4170000E+00	.4192340E+00	-.2133890E-02	-.51

TABLE OF RESIDUALS (TOTAL)

CASE NO.	Y VALUE	Y ESTIMATE	RESIDUAL	PERCENT VARIATION
101	.4491000E+00	.4529553E+00	-3855332E-02	-.85
102	.4558000E+00	.4600690E+00	-4269049E-02	-.93
103	.4634000E+00	.4873021E+00	-3902095E-02	-.84
104	.4712000E+00	.4748529E+00	-3452872E-02	-.73
105	.4791000E+00	.4821189E+00	-3019912E-02	-.63
106	.4871000E+00	.4674702E+00	-3701501E-02	-.84
107	.4952000E+00	.2851084E+00	-.818488E-03	-.20
108	.5034000E+00	.3016112E+00	-3288817E-02	1.09
109	.5231000E+00	.3205480E+00	-2552001E-02	-.80
110	.5418000E+00	.3417655E+00	-1854802E-03	-.05
111	.5635000E+00	.3650764E+00	-1576350E-02	-.43
112	.5889000E+00	.3903218E+00	-1421796E-02	-.36
113	.6188000E+00	.4173708E+00	-1229176E-02	-.29
114	.6238000E+00	.4228871E+00	-8128604E-03	-.19
115	.6284000E+00	.4286704E+00	-7295985E-03	-.17
116	.6352000E+00	.4344199E+00	-7901479E-03	-.18
117	.6411000E+00	.4402348E+00	-8852417E-03	-.20
118	.6473000E+00	.4461146E+00	-1185590E-02	-.27
119	.6784000E+00	.2746377E+00	-3782325E-02	1.37
120	.3000000E+00	.2955171E+00	-4482826E-02	1.52
121	.3168000E+00	.3145043E+00	-2295866E-02	-.72
122	.3363000E+00	.3361264E+00	-1736063E-03	-.05
123	.3584000E+00	.3602599E+00	-1859861E-02	-.52
124	.3838000E+00	.3867131E+00	-2913108E-02	-.75
125	.4138000E+00	.4152173E+00	-1517313E-02	-.37
126	.4205000E+00	.4212834E+00	-7933859E-03	-.18
127	.4271000E+00	.4273288E+00	-2267519E-03	-.05
128	.4338000E+00	.4326526E+00	-3475674E-03	-.09
129	.4410000E+00	.4396535E+00	-1346518E-02	-.31
130	.4488000E+00	.4458310E+00	-2869013E-02	-.64
131	.2847000E+00	.2809889E+00	-3711094E-02	1.32
132	.3052000E+00	.3002711E+00	-4928904E-02	1.64
133	.3229000E+00	.3202983E+00	-2601741E-02	-.81
134	.3432000E+00	.3430632E+00	-1388474E-03	-.04
135	.3670000E+00	.3684488E+00	-1448778E-02	-.39
136	.3843000E+00	.3882590E+00	-1959020E-02	-.48
137	.4258000E+00	.4282183E+00	-6192801E-02	-.19
138	.4327000E+00	.4325880E+00	-1120250E-03	-.03
139	.4384000E+00	.4388397E+00	-6403443E-03	-.15
140	.2903000E+00	.2853784E+00	-4821566E-02	1.72
141	.3126000E+00	.3097400E+00	-2860031E-02	-.82
142	.3345000E+00	.3316500E+00	-2849853E-02	-.86
143	.3575000E+00	.3565249E+00	-9751411E-03	-.27
144	.3845000E+00	.3842461E+00	-2538782E-03	-.07
145	.4153000E+00	.4146037E+00	-6862349E-03	-.17
146	.4316000E+00	.4297746E+00	-8255836E-03	-.15
147	.4283000E+00	.4274418E+00	-8583558E-03	-.20
148	.3020000E+00	.2958427E+00	-6057287E-02	2.05
149	.3250000E+00	.3226241E+00	-2375836E-02	-.74
150	.3494000E+00	.3467659E+00	-2834132E-02	-.82

TABLE OF RESIDUALS (TOTAL)

CASE NO.	Y VALUE	Y ESTIMATE	RESIDUAL	PERCENT VARIATION
151	.3760000E+00	.3742201E+00	-1779945E-02	-.48
152	.4065000E+00	.4048417E+00	-1858304E-02	-.41
153	.4128000E+00	.4113248E+00	-1275185E-02	-.31
154	.4200000E+00	.4207248E+00	-1273443E-02	-.51
155	.2647000E+00	.2634521E+00	-1244883E-02	-.47
156	.2782000E+00	.2776609E+00	-5391446E-03	-.19
157	.2938000E+00	.2946588E+00	-7587617E-03	-.26
158	.3116000E+00	.3140928E+00	-2492788E-02	-.78
159	.3340000E+00	.3357015E+00	-1701524E-02	-.51
160	.3577000E+00	.3592899E+00	-1589916E-02	-.44
161	.3858000E+00	.3847065E+00	-1093521E-02	-.28
162	.3908000E+00	.3899980E+00	-8019532E-03	-.21
163	.3982000E+00	.3953569E+00	-8430530E-03	-.21
164	.4018000E+00	.4007295E+00	-1117848E-02	-.28
165	.2585000E+00	.2584120E+00	-2888050E-02	-.81
166	.2734000E+00	.2723787E+00	-1020272E-02	-.37
167	.2897000E+00	.2890718E+00	-6281562E-03	-.22
168	.3083000E+00	.3087550E+00	-4550243E-03	-.15
169	.3298000E+00	.3211050E+00	-1305036E-02	-.39
170	.3538000E+00	.3558561E+00	-1956149E-02	-.55
171	.3822000E+00	.3828032E+00	-6032089E-03	-.16
172	.3884000E+00	.3884414E+00	-4140207E-04	-.01
173	.3948000E+00	.3945960E+00	-6403610E-03	-.16
174	.4238000E+00	.4239846E+00	-2295370E-02	-.68
175	.2783000E+00	.2788528E+00	-1647361E-02	-.52
176	.2658000E+00	.2645847E+00	-1015211E-02	-.34
177	.3160000E+00	.3154107E+00	-5893279E-03	-.18
178	.3382000E+00	.3390128E+00	-8128421E-02	-.24
179	.3639000E+00	.3651210E+00	-1220951E-02	-.33
180	.3886000E+00	.3706239E+00	-1023875E-02	-.28
181	.3754000E+00	.3782170E+00	-8170173E-03	-.22
182	.3815000E+00	.3818990E+00	-3888991E-03	-.10
183	.3878000E+00	.3876689E+00	-1315271E-03	-.03
184	.3916000E+00	.3879888E+00	-2001532E-02	-.75
185	.2887000E+00	.2865884E+00	-215169E-02	-.75
186	.3083000E+00	.3061632E+00	-2136652E-02	-.70
187	.3304000E+00	.3290982E+00	-1300751E-02	-.40
188	.3550000E+00	.3550271E+00	-3705634E-04	-.01
189	.3605000E+00	.3605587E+00	-5869163E-04	-.02
190	.3661000E+00	.3661869E+00	-8687571E-04	-.02
191	.3718000E+00	.3719197E+00	-1874037E-04	-.01
192	.3778000E+00	.3777555E+00	-1444961E-03	-.04
193	.2821000E+00	.2815412E+00	-5588450E-03	-.20
194	.3033000E+00	.3011207E+00	-2179279E-02	-.72
195	.3238000E+00	.3228674E+00	-6258897E-03	-.20
196	.3477000E+00	.3484827E+00	-7828801E-03	-.22
197	.3528000E+00	.3539955E+00	-1095504E-02	-.31
198	.3584000E+00	.3586382E+00	-1238287E-02	-.34
199	.3641000E+00	.3654084E+00	-1308420E-02	-.36
200	.3957000E+00	.3954602E+00	-2387693E-03	-.08

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TABLE OF RESIDUALS (TOTAL)

CASE NO.	Y VALUE	Y ESTIMATE	RESIDUAL	PERCENT VARIATION
201	.3284000E+00	.3257072E+00	.2692846E-02	.83
202	.3476000E+00	.3440547E+00	.3543301E-02	.45
203	.3715000E+00	.3725892E+00	-.1069179E-02	-.29
204	.3930000E+00	.3967088E+00	-.3708766E-02	-.93
205	.4240000E+00	.4271334E+00	-.3133381E-02	-.73
206	.4592000E+00	.4586574E+00	.5425640E-03	.12
207	.4919000E+00	.4933128E+00	-.1412838E-02	-.25
208	.5292000E+00	.5302091E+00	-.1009165E-02	-.19
209	.5419000E+00	.5378458E+00	.4054232E-02	.75
210	.5688000E+00	.5655640E+00	.3233866E-02	.59
211	.5488000E+00	.5533680E+00	-.3569021E-02	-.64
212	.3094000E+00	.3180095E+00	-.8609478E-02	-2.71
213	.3344000E+00	.3414976E+00	-.7097599E-02	-2.09
214	.3620000E+00	.3643315E+00	-.2313542E-02	-.64
215	.3920000E+00	.3907923E+00	.1207720E-02	.31
216	.4220000E+00	.4205849E+00	.1415132E-02	.34
217	.4503000E+00	.4534128E+00	-.3112828E-02	-.69
218	.4854000E+00	.4880347E+00	-.2634675E-02	-.74
219	.5225000E+00	.5272547E+00	-.3245276E-02	-.99
220	.5639000E+00	.5319588E+00	.3704171E-02	1.63
221	.5494000E+00	.5423322E+00	.6164821E-02	1.14
222	.5502000E+00	.5513657E+00	-.1165660E-02	-.21
223	.3174000E+00	.3230065E+00	-.6406452E-02	-1.98
224	.3455000E+00	.3485848E+00	-.3084804E-02	-.88
225	.3743000E+00	.3724587E+00	.1841320E-02	.49
226	.4040000E+00	.4000622E+00	.3937778E-02	.98
227	.4350000E+00	.4342317E+00	.7683300E-03	.18
228	.4650000E+00	.4687070E+00	-.3701883E-02	-.78
229	.5026000E+00	.5023698E+00	.2301844E-03	.05
230	.5495000E+00	.5421366E+00	.7380422E-02	1.36
231	.5488000E+00	.5504014E+00	-.6014202E-03	-.11
232	.3384000E+00	.3354824E+00	.8175635E-03	.27
233	.3647000E+00	.3624527E+00	.2247307E-02	.62
234	.3935000E+00	.3882095E+00	.5290516E-02	1.36
235	.4180000E+00	.4153021E+00	.2697918E-02	.65
236	.4480000E+00	.4475614E+00	.4385848E-03	.10
237	.4892000E+00	.4880358E+00	.1164413E-02	.24
238	.4970000E+00	.4957804E+00	.1289833E-02	.58
239	.5088000E+00	.5036089E+00	.5193212E-02	.63
240	.5156000E+00	.5115731E+00	.4028014E-02	.78
241	.5257000E+00	.5186576E+00	.6042434E-02	1.16
242	.5361000E+00	.5278586E+00	.8241401E-02	1.56
243	.5522000E+00	.5515973E+00	.6602707E-02	.46
244	.3807000E+00	.3809874E+00	-.2872661E-03	-.05
245	.4070000E+00	.4088759E+00	-.1875884E-02	-.46
246	.4382000E+00	.4411687E+00	-.2984719E-02	-.67
247	.4759000E+00	.4774455E+00	-.1548481E-02	-.32
248	.4854000E+00	.4851530E+00	.247032E-03	.05
249	.4839000E+00	.4829966E+00	.8904770E-03	.19
250	.5022000E+00	.5009870E+00	.1213025E-02	.24

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TABLE OF RESIDUALS (TOTAL)

CASE NO.	Y VALUE	Y ESTIMATE	RESIDUAL	PERCENT VARIATION
251	.5102000E+00	.509128E+00	.1187121E-02	.23
252	.5189000E+00	.5173751E+00	.1524874E-02	.29
253	.2948000E+00	.2898095E+00	.4809502E-02	-1.66
254	.3048000E+00	.3076066E+00	-.2808916E-02	-.91
255	.3275000E+00	.325918E+00	.1634483E-02	.24
256	.3474000E+00	.3475700E+00	-.1700144E-03	-.05
257	.3734000E+00	.3720009E+00	.1399058E-02	.38
258	.3855000E+00	.3890157E+00	-.356597E-03	-.12
259	.4281000E+00	.4283979E+00	-.2297892E-02	-.54
260	.4578000E+00	.4615215E+00	-.3631547E-02	-.79
261	.4896000E+00	.4936085E+00	-.4008470E-02	-.81
262	.4965000E+00	.5005710E+00	-.4071047E-02	-.81
263	.2949000E+00	.3003916E+00	-.5591619E-02	-1.86
264	.3197000E+00	.3216319E+00	-.1931930E-02	-.60
265	.3485000E+00	.3495089E+00	-.103310E-02	-.59
266	.3684000E+00	.3667630E+00	.1630003E-03	.10
267	.3913000E+00	.3941098E+00	-.2809912E-02	-.71
268	.4213000E+00	.4242670E+00	-.2967009E-02	-.70
269	.4521000E+00	.4570080E+00	-.4908001E-02	-1.07
270	.4912000E+00	.4921503E+00	-.950345E-03	-.19
271	.4981000E+00	.4984530E+00	-.353289E-02	-.27
272	.3015000E+00	.3053277E+00	-.3827666E-02	-1.25
273	.3289000E+00	.3278992E+00	.9582092E-03	.29
274	.3505000E+00	.349750E+00	.769985E-03	.21
275	.3738000E+00	.3751790E+00	-.1372016E-02	-.42
276	.4019000E+00	.4027711E+00	-.871088E-03	-.46
277	.4310000E+00	.432852E+00	-.4285177E-02	-.98
278	.4652000E+00	.4694822E+00	-.4282234E-02	-.91
279	.4732000E+00	.4766264E+00	-.3426415E-02	-.72
280	.4816000E+00	.4838690E+00	-.2268862E-02	-.47
281	.4901000E+00	.4912086E+00	-.1108600E-02	-.23
282	.3116000E+00	.3151819E+00	-.3581917E-02	-1.14
283	.3385000E+00	.3399044E+00	-.1404364E-02	-.40
284	.3632000E+00	.3637021E+00	-.502723E-03	-.11
285	.3900000E+00	.391210E+00	-.110048E-03	.08
286	.4193000E+00	.4221457E+00	-.2845713E-02	-.93
287	.4522000E+00	.4562071E+00	-.4007105E-02	-.88
288	.4597000E+00	.4632721E+00	-.3672044E-02	-.78
289	.4878000E+00	.4706504E+00	.17030382E-02	.65
290	.4780000E+00	.4780404E+00	-.2040404E-02	-.43
291	.3263000E+00	.3286304E+00	-.2330413E-02	-.71
292	.3533000E+00	.3556727E+00	-.2372677E-02	-.67
293	.3810000E+00	.3817021E+00	-.7021112E-03	-.18
294	.4100000E+00	.4117904E+00	-.1780415E-02	-.43
295	.4180000E+00	.418255E+00	-.282504E-02	-.66
296	.4490000E+00	.4521717E+00	-.3121717E-02	-.70
297	.4585000E+00	.4601334E+00	-.1633387E-02	-.36
298	.2613000E+00	.2643714E+00	-.3071354E-02	-1.16
299	.2799000E+00	.2776786E+00	.2213974E-03	.12
300	.2950000E+00	.2929931E+00	.2060718E-02	.67

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CASE NO.	Y VALUE	Y ESTIMATE	RESIDUAL	PERCENT VARIATION
301	.312800E+00	.311299E+00	-.1500830E-02	.48
302	.333100E+00	.332349E+00	-.754185E-03	.23
303	.354700E+00	.355783E+00	-.1083058E-02	-.30
304	.380600E+00	.3813830E+00	-.792994E-03	-.21
305	.411700E+00	.4090072E+00	-.2692789E-02	.66
306	.417100E+00	.4147582E+00	-.2341776E-02	.56
307	.423000E+00	.4205830E+00	-.2417001E-02	.57
308	.425200E+00	.4244808E+00	-.7719388E-02	.84
309	.435800E+00	.4324850E+00	-.3318920E-02	.75
310	.271100E+00	.2724887E+00	-.1388683E-02	-.51
311	.289200E+00	.2880471E+00	-.1528402E-02	.05
312	.307600E+00	.3047822E+00	-.2877825E-03	.26
313	.327800E+00	.3278376E+00	-.3757807E-04	-.01
314	.350100E+00	.3518000E+00	-.1700009E-02	-.48
315	.378300E+00	.3783788E+00	-.707831E-02	-.55
316	.407200E+00	.4073483E+00	-.1483256E-03	-.04
317	.413800E+00	.4134123E+00	-.4876677E-03	.12
318	.421200E+00	.4195834E+00	-.1656607E-02	.38
319	.428400E+00	.4258003E+00	-.258888E-02	.61
320	.274500E+00	.2763303E+00	-.1830348E-02	-.68
321	.295600E+00	.2941890E+00	-.1430875E-02	.48
322	.314100E+00	.3129540E+00	-.1145864E-02	.37
323	.335100E+00	.3351422E+00	-.4220128E-04	-.01
324	.359800E+00	.3603568E+00	-.556789E-02	-.38
325	.387400E+00	.3882934E+00	-.8934064E-03	-.23
326	.393600E+00	.3941858E+00	-.5858090E-03	-.15
327	.400000E+00	.4001780E+00	-.1758799E-03	-.04
328	.408800E+00	.4062624E+00	-.258682E-02	.08
329	.415300E+00	.4124426E+00	-.285641E-02	.26
330	.420500E+00	.4187182E+00	-.1781854E-02	.42
331	.282500E+00	.2841888E+00	-.1688848E-02	-.60
332	.304400E+00	.3042304E+00	-.1685659E-03	.06
333	.328500E+00	.3248984E+00	-.3601644E-02	.49
334	.348900E+00	.3481964E+00	-.7035600E-03	.20
335	.377300E+00	.3767467E+00	-.5533344E-03	.15
336	.383300E+00	.3826176E+00	-.6824309E-03	.18
337	.389500E+00	.3888034E+00	-.6965751E-03	.23
338	.395900E+00	.3947922E+00	-.1197828E-02	.30
339	.402800E+00	.4009118E+00	-.1888152E-02	.42
340	.405000E+00	.4072306E+00	-.2289418E-02	.58
341	.292900E+00	.2953246E+00	-.2424808E-02	-.82
342	.317200E+00	.3176750E+00	-.4750067E-03	.15
343	.342400E+00	.3405747E+00	-.1825341E-02	.54
344	.369100E+00	.3674521E+00	-.1647882E-02	.45
345	.375000E+00	.3732887E+00	-.1731284E-02	.46
346	.381100E+00	.3792249E+00	-.1875094E-02	.49
347	.387300E+00	.3853178E+00	-.1982215E-02	.51
348	.395000E+00	.3915844E+00	-.3415402E-02	.85
349	.245600E+00	.2477510E+00	-.2150951E-02	-.87
350	.285000E+00	.2861047E+00	-.1104672E-03	-.24

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TABLE OF RESIDUALS (TOTAL)

CASE NO.	Y VALUE	Y ESTIMATE	RESIDUAL	PERCENT VARIATION
351	.270500E+00	.2692897E+00	-.1212251E-02	.45
352	.288300E+00	.2860326E+00	-.22644017E-03	.09
353	.304200E+00	.3057047E+00	-.1504720E-02	-.48
354	.325300E+00	.3279188E+00	-.2616832E-02	-.80
355	.350400E+00	.3524070E+00	-.1997016E-02	-.56
356	.379000E+00	.3789903E+00	-.871858E-03	.19
357	.384800E+00	.3845310E+00	-.2689723E-03	.10
358	.390500E+00	.3901578E+00	-.3421902E-03	.09
359	.252100E+00	.2543862E+00	-.2286158E-02	-.90
360	.265100E+00	.2659911E+00	-.8910774E-03	-.34
361	.281900E+00	.2816578E+00	-.2424475E-03	.09
362	.300900E+00	.3010897E+00	-.1886748E-03	-.06
363	.322800E+00	.3236788E+00	-.8767820E-03	-.27
364	.347200E+00	.3490313E+00	-.1831272E-02	-.52
365	.374100E+00	.3768802E+00	-.2780254E-03	.21
366	.382400E+00	.3827904E+00	-.3903887E-03	.09
367	.255700E+00	.2579487E+00	-.2248701E-02	-.87
368	.270100E+00	.2708319E+00	-.7318511E-03	.27
369	.288100E+00	.2875383E+00	-.5617402E-03	.20
370	.308700E+00	.3081132E+00	-.5868141E-03	.19
371	.332300E+00	.3319525E+00	-.3475485E-03	.10
372	.357800E+00	.3586839E+00	-.868386E-02	-.30
373	.363400E+00	.3643250E+00	-.9249890E-03	-.25
374	.389400E+00	.3700877E+00	-.1937260E-03	.19
375	.378000E+00	.3799304E+00	-.1950348E-03	.09
376	.263400E+00	.2680431E+00	-.463072E-02	-.98
377	.280780E+00	.2811201E+00	-.4201268E-03	.15
378	.301200E+00	.2897095E+00	-.1480550E-02	.50
379	.223800E+00	.2223943E+00	-.1405705E-02	.44
380	.249000E+00	.2485492E+00	-.4508018E-03	.12
381	.354500E+00	.3541849E+00	-.3151230E-03	.09
382	.360200E+00	.3599210E+00	-.2790322E-03	.08
383	.272700E+00	.2788561E+00	-.6156077E-02	-.85
384	.296700E+00	.2982929E+00	-.4470515E-03	.15
385	.317300E+00	.3170740E+00	-.2260017E-03	.07
386	.349000E+00	.342282E+00	-.67178E-03	.19
387	.347500E+00	.3478845E+00	-.384105E-03	.10
388	.293800E+00	.2919529E+00	-.1847099E-02	.56
389	.312900E+00	.3129582E+00	-.5816644E-04	.02
390	.334700E+00	.3339789E+00	-.7230837E-03	.22
391	.360500E+00	.3610157E+00	-.5157224E-03	.14
392	.388400E+00	.3882246E+00	-.1753844E-03	.05
393	.419300E+00	.4188285E+00	-.471495E-02	.59
394	.448800E+00	.4500828E+00	-.1282818E-02	.29
395	.484400E+00	.4857978E+00	-.1387757E-02	.29
396	.517800E+00	.523179E+00	-.5417834E-02	-.81
397	.529500E+00	.5318686E+00	-.236861E-02	.60
398	.548100E+00	.5388417E+00	-.923151E-03	.08
399	.101800E+00	.1054420E+00	-.363182E-02	-.30
400	.128100E+00	.1297044E+00	-.1608428E-02	-.48

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TABLE OF RESIDUALS (TOTAL)

CASE NO.	Y VALUE	Y ESTIMATE	RESIDUAL	PERCENT VARIATION
401	.3558000E+00	.3532116E+00	.2388427E-02	.68
402	.3846000E+00	.3804280E+00	.4171962E-02	1.10
403	.4131000E+00	.4110606E+00	.2039448E-02	.50
404	.4395000E+00	.4448068E+00	-.5306798E-02	-1.19
405	.4778000E+00	.4814199E+00	-.3619871E-02	-.75
406	.5189000E+00	.5206995E+00	-.1799456E-02	-.35
407	.5315000E+00	.5288603E+00	.2638982E-02	.50
408	.3108000E+00	.3118268E+00	-.8267993E-03	-.27
409	.3382000E+00	.3371635E+00	.1076506E-02	.27
410	.3858000E+00	.3817066E+00	.4093425E-02	1.35
411	.3954000E+00	.3906488E+00	.5394156E-02	1.37
412	.4210000E+00	.4203570E+00	.6430900E-03	.15
413	.4528000E+00	.4570538E+00	-.4231757E-02	-.93
414	.4853000E+00	.4961229E+00	-.1771051E-03	.04
415	.5054000E+00	.5030738E+00	.2326166E-02	.48
416	.5147000E+00	.5111336E+00	.3563395E-02	.70
417	.5232000E+00	.5182008E+00	.5099187E-02	.75
418	.5332000E+00	.5275741E+00	.5625896E-02	1.07
419	.3263000E+00	.3239953E+00	.2404664E-02	.74
420	.3538000E+00	.3518239E+00	.1976864E-02	.52
421	.3820000E+00	.3780489E+00	.3950088E-02	1.04
422	.4082000E+00	.4085191E+00	-.8809006E-03	-.17
423	.4405000E+00	.4427384E+00	-.2239408E-02	-.51
424	.4796000E+00	.4802900E+00	-.789511E-03	-.16
425	.4892000E+00	.4883073E+00	.8925991E-03	.18
426	.4982000E+00	.4962492E+00	.2850833E-02	.57
427	.5081000E+00	.5045137E+00	.3586253E-02	.71
428	.5176000E+00	.5127993E+00	.4800690E-02	.94
429	.3393000E+00	.3405707E+00	-.1270654E-02	-.37
430	.3693000E+00	.3706191E+00	-.1319079E-02	-.38
431	.3987000E+00	.3992788E+00	-.4232072E-03	-.11
432	.4302000E+00	.4323254E+00	-.2125355E-02	-.48
433	.4671000E+00	.4684460E+00	-.1346042E-02	-.50
434	.4761000E+00	.4773271E+00	-.1227099E-02	-.26
435	.4856000E+00	.4853544E+00	.2456243E-03	.05
436	.2747000E+00	.2765333E+00	-.1833326E-02	-.66
437	.2919000E+00	.2959096E+00	-.4009555E-02	-1.35
438	.3168000E+00	.3149087E+00	.1881257E-02	.60
439	.3400000E+00	.3389729E+00	.1027093E-02	.30
440	.3732000E+00	.3719413E+00	.1358474E-02	.39
441	.3879000E+00	.3884443E+00	-.5442512E-03	-.14
442	.4187000E+00	.4190267E+00	-.3267156E-03	-.08
443	.4523000E+00	.4509729E+00	.1327067E-02	.29
444	.4580000E+00	.4578115E+00	.3885495E-03	.08
445	.4641000E+00	.4643307E+00	-.2307089E-03	-.05
446	.4704000E+00	.4711298E+00	-.7297701E-03	-.15
447	.4770000E+00	.4780077E+00	-.1007272E-02	-.21
448	.4838000E+00	.4849637E+00	-.1163701E-02	-.24
449	.2884000E+00	.2882753E+00	.1247351E-03	.04
450	.3109000E+00	.3108927E+00	.7317071E-05	.00

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TABLE OF RESIDUALS (TOTAL)

CASE NO.	Y VALUE	Y ESTIMATE	RESIDUAL	PERCENT VARIATION
451	.3341000E+00	.3323763E+00	.1723730E-02	.52
452	.3558000E+00	.3571257E+00	-.1225707E-02	-.34
453	.3820000E+00	.3849103E+00	-.2910311E-02	-.76
454	.4123000E+00	.4154723E+00	-.3172258E-02	-.76
455	.4452000E+00	.4485966E+00	-.3396638E-02	-.76
456	.4526000E+00	.4555128E+00	-.2912941E-02	-.64
457	.4610000E+00	.4625244E+00	-.1525244E-02	-.32
458	.4685000E+00	.4684287E+00	.1126893E-02	.24
459	.4770000E+00	.4768218E+00	.1782202E-03	.04
460	.4855000E+00	.4841075E+00	.1392498E-02	.29
461	.2942000E+00	.2935792E+00	.6208246E-03	.21
462	.3178000E+00	.3174888E+00	.3131758E-03	.10
463	.3389000E+00	.3400103E+00	-.1103446E-03	-.03
464	.3645000E+00	.3659026E+00	-.1402586E-02	-.38
465	.3923000E+00	.3949393E+00	-.2639348E-02	-.67
466	.4233000E+00	.4248993E+00	-.1567999E-02	-.33
467	.4587000E+00	.4614287E+00	-.2732755E-02	-.59
468	.4668000E+00	.4686576E+00	-.1857649E-02	-.40
469	.4754000E+00	.4758744E+00	-.5743833E-03	-.12
470	.2028000E+00	.2040260E+00	-.1425959E-02	-.47
471	.3287000E+00	.3301255E+00	-.1425513E-02	-.43
472	.3546000E+00	.3545319E+00	.6805208E-04	.02
473	.3817000E+00	.3825341E+00	-.8241077E-03	-.22
474	.4125000E+00	.4139065E+00	-.1408508E-02	-.34
475	.4458000E+00	.4483728E+00	-.2772751E-02	-.62
476	.4523000E+00	.4556188E+00	-.3415895E-02	-.73
477	.4710000E+00	.4780346E+00	-.7318956E-02	-.15
478	.3437000E+00	.3484543E+00	-.4734307E-02	-.79
479	.3730000E+00	.3730825E+00	-.8246825E-04	-.02
480	.4032000E+00	.4036740E+00	-.4740029E-03	-.12
481	.4091000E+00	.4102435E+00	-.1143537E-02	-.28
482	.4152000E+00	.4169581E+00	-.1758088E-02	-.42
483	.4216000E+00	.4238151E+00	-.2215112E-02	-.52
484	.4281000E+00	.4308121E+00	-.2712141E-02	-.63
485	.4351000E+00	.4379468E+00	-.2846790E-02	-.65
486	.2548000E+00	.2531575E+00	.1645499E-02	.61
487	.2800000E+00	.2875311E+00	-.7549959E-02	-.55
488	.2848000E+00	.2834241E+00	.1375856E-02	.48
489	.3036000E+00	.3021170E+00	.1462967E-02	.48
490	.3241000E+00	.3222184E+00	.1826127E-02	.56
491	.3464000E+00	.3467761E+00	-.3761312E-03	-.11
492	.3727000E+00	.3723051E+00	.3949477E-03	.11
493	.4048000E+00	.3997516E+00	.5048397E-02	1.21
494	.4104000E+00	.4054988E+00	.4940220E-02	1.22
495	.4164000E+00	.4112388E+00	.5361210E-02	1.30
496	.4232000E+00	.4170878E+00	.6112210E-02	1.47
497	.2623000E+00	.2612447E+00	.1055386E-02	.40
498	.2785000E+00	.2785944E+00	-.9391966E-03	-.13
499	.2983000E+00	.2982389E+00	.6110635E-04	.02
500	.3187000E+00	.3196151E+00	-.8944499E-04	-.03

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CASE NO.	Y VALUE	Y ESTIMATE	RESIDUAL	PERCENT VARIATION
501	.3423000E+00	.3437304E+00	-.1430396E-02	-.42
502	.3687000E+00	.3703325E+00	-.1632517E-02	-.44
503	.4006000E+00	.3992202E+00	.1379803E-02	.35
504	.4078000E+00	.4052572E+00	.2542824E-02	.63
505	.4152000E+00	.4113779E+00	.3822137E-02	.93
506	.2667000E+00	.2654442E+00	.1255819E-02	.47
507	.2846000E+00	.2853492E+00	-.7481638E-03	-.26
508	.3033000E+00	.3047866E+00	-.1484866E-02	-.48
509	.3274000E+00	.3272875E+00	.1124589E-03	.03
510	.3515000E+00	.3526550E+00	-.1155040E-02	-.33
511	.3802000E+00	.3806142E+00	-.4141556E-03	-.11
512	.3865000E+00	.3864980E+00	.2007127E-05	.00
513	.3931000E+00	.3924756E+00	.6243556E-02	.16
514	.4000000E+00	.3985457E+00	.1454276E-02	.36
515	.2754000E+00	.2739662E+00	.1483786E-02	.55
516	.2853000E+00	.2866031E+00	-.7031017E-03	-.24
517	.3181000E+00	.3173034E+00	.798572E-02	.25
518	.3429000E+00	.3419342E+00	.9638978E-02	.28
519	.3704000E+00	.3696374E+00	.7625312E-02	.21
520	.3764000E+00	.3755232E+00	.8777823E-03	.23
521	.3826000E+00	.3815170E+00	.1082961E-02	.28
522	.3891000E+00	.3876201E+00	.1479920E-02	.38
523	.2668000E+00	.2655915E+00	.1208544E-02	.42
524	.3096000E+00	.3100882E+00	-.4081598E-03	-.13
525	.3356000E+00	.3335402E+00	.2059788E-02	.62
526	.3629000E+00	.3607505E+00	.2149528E-02	.60
527	.3688000E+00	.3661000E+00	.2700048E-02	.60
528	.3383000E+00	.3363996E+00	.1943148E-04	-.04
529	.3471000E+00	.3467779E+00	.3224488E-03	.13
530	.2822000E+00	.2808085E+00	.1391459E-02	.53
531	.2788000E+00	.2782139E+00	.5861389E-03	.21
532	.2973000E+00	.2984480E+00	-.1146026E-02	-.38
533	.3187000E+00	.3211576E+00	-.2457639E-02	-.77
534	.3438000E+00	.3461041E+00	-.2304111E-02	-.67
535	.3733000E+00	.3731014E+00	.1986376E-03	.05
536	.3787000E+00	.3787336E+00	-.3361505E-04	-.01
537	.2429000E+00	.2440045E+00	-.1044523E-02	-.04
538	.2530000E+00	.2572388E+00	-.4237701E-02	-.16
539	.2743000E+00	.2741392E+00	.1608418E-03	.06
540	.2938000E+00	.2942298E+00	-.4297515E-03	-.11
541	.3165000E+00	.3173779E+00	-.8779025E-03	-.28
542	.3410000E+00	.3432319E+00	-.2231892E-02	-.65
543	.3464000E+00	.3487038E+00	-.2303768E-02	-.66
544	.3519000E+00	.3542718E+00	-.2371807E-02	-.67
545	.3577000E+00	.3599344E+00	-.2234393E-02	-.62
546	.3638000E+00	.3656900E+00	-.1889988E-02	-.52
547	.2478000E+00	.2479239E+00	-.2285866E-04	-.01
548	.2625000E+00	.2628344E+00	-.3324092E-03	-.13
549	.2808000E+00	.2803877E+00	.5122712E-03	.18
550	.3018000E+00	.3016211E+00	.1788740E-03	.08

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TABLE OF RESIDUALS (TOTAL)

CASE NO.	Y VALUE	Y ESTIMATE	RESIDUAL	PERCENT VARIATION
551	.3254000E+00	.3260214E+00	-.8214354E-03	-.19
552	.3517000E+00	.3532324E+00	-.1532420E-02	-.43
553	.3575000E+00	.3589878E+00	-.1487765E-02	-.41
554	.3584000E+00	.3581138E+00	.2117620E-02	.08
555	.3736000E+00	.3737320E+00	-.1321744E-03	-.04
556	.3943000E+00	.3931515E+00	.1184854E-02	.30
557	.3178000E+00	.3184648E+00	-.6305233E-02	-.41
558	.3227000E+00	.3215842E+00	.1115847E-02	.35
559	.3278000E+00	.3268054E+00	.9945502E-02	.30
560	.3328000E+00	.3321556E+00	.6444476E-03	.19
561	.3379000E+00	.3376316E+00	.2684489E-03	.08
562	.3432000E+00	.3432307E+00	-.3071447E-04	-.01
563	.2675000E+00	.2699652E+00	-.2485249E-02	-.92
564	.2875000E+00	.2894653E+00	-.1906520E-02	-.66
565	.3115000E+00	.3110795E+00	.4225188E-03	.14
566	.3162000E+00	.3159402E+00	.2598137E-03	.08
567	.3211000E+00	.3209688E+00	.1312073E-03	.04
568	.3260000E+00	.3261577E+00	-.1576744E-03	-.05
569	.3354000E+00	.3320274E+00	.3372610E-02	1.14
570	.3465000E+00	.3454345E+00	.1065549E-02	.31
571	.3750000E+00	.3679785E+00	.7021460E-02	1.91
572	.3965000E+00	.3903955E+00	.6104549E-02	1.58
573	.4116000E+00	.4162401E+00	-.4640099E-02	-1.11
574	.4374000E+00	.4438814E+00	-.6481361E-02	-1.46
575	.4740000E+00	.4727101E+00	.1290145E-02	.03
576	.5211000E+00	.5043416E+00	.1675836E-01	3.32
577	.5474000E+00	.5370245E+00	.1037550E-01	1.93
578	.5496000E+00	.5437487E+00	.5851286E-02	1.08
579	.5902000E+00	.5905343E+00	-.3343033E-03	-.06
580	.5905000E+00	.5972808E+00	-.6880775E-02	-1.23
581	.5543000E+00	.5642877E+00	-.9887651E-02	-1.77
582	.5598000E+00	.5712546E+00	-.1145446E-01	-2.01
583	.3185000E+00	.3226570E+00	-.4157009E-02	-1.91
584	.3504000E+00	.3574230E+00	-.7022940E-02	-1.96
585	.3815000E+00	.3868766E+00	-.6475990E-02	-1.73
586	.4050000E+00	.4094358E+00	-.4438933E-02	-1.08
587	.4358000E+00	.4381966E+00	-.2396574E-02	-.59
588	.4701000E+00	.4689802E+00	.1119787E-02	.24
589	.5100000E+00	.5017286E+00	.8271403E-02	1.63
590	.5482000E+00	.5268339E+00	.2113610E-01	2.21
591	.5495000E+00	.5435104E+00	.5989593E-02	1.10
592	.5500000E+00	.5507286E+00	-.7286174E-03	-.13
593	.5507000E+00	.5580179E+00	-.7317931E-02	-1.31
594	.5535000E+00	.5632778E+00	-.9877755E-02	-1.75
595	.5611000E+00	.5729075E+00	-.1170751E-01	-2.04
596	.5200000E+00	.5268766E+00	-.6875990E-02	-1.32
597	.5450000E+00	.5327744E+00	.1221256E-02	-.23
598	.3882000E+00	.3900580E+00	-.1868011E-02	-.48
599	.4170000E+00	.4179702E+00	-.9701551E-03	-.23
600	.4487000E+00	.4479829E+00	.7170521E-03	.16

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CASE NO.	Y VALUE	Y ESTIMATE	RESIDUAL	PERCENT VARIATION
601	.4808000E+00	.4801238E+00	-.6764182E-03	-.14
602	-.5217000E+00	-.5143280E+00	-.7371969E-02	1.43
603	.5500000E+00	.5505130E+00	.5130297E-03	-.09
604	.3509000E+00	.3579903E+00	-.7080272E-02	-1.27
605	.5584000E+00	.5655277E+00	-.892733E-02	-1.58
606	.5828000E+00	.573198E+00	-.102978E-01	-1.78
607	.3548000E+00	.3582092E+00	-.3609176E-02	-1.07
608	-.3707000E+00	-.3764573E+00	-.5757263E-01	-1.53
609	.4078000E+00	.4046248E+00	.3175250E-02	-.78
610	.4378000E+00	.4346458E+00	.3154187E-02	-.73
611	.4672000E+00	.4669942E+00	.2057567E-03	-.04
612	.5026000E+00	.5016822E+00	.9178218E-03	-.18
613	.5488000E+00	.5388317E+00	.1016827E-01	1.89
614	.5489000E+00	.5482847E+00	.2615334E-02	-.48
615	.5507000E+00	.5540235E+00	-.3323472E-02	-.60
616	.5507000E+00	.5618474E+00	-.7147382E-02	-1.27
617	.5608000E+00	.5697558E+00	-.895644E-02	-1.57
618	.3455000E+00	.3532031E+00	-.7703070E-02	-2.18
619	.3857000E+00	.3837710E+00	-.2070973E-02	-.205
620	.4254000E+00	.4241702E+00	.122813E-02	-.29
621	.4555000E+00	.4535530E+00	.1946990E-02	-.43
622	.4925000E+00	.4920194E+00	.4805676E-03	-.10
623	.5342000E+00	.5299008E+00	.4299245E-02	-.81
624	.5426000E+00	.5277843E+00	.16013544E-02	1.12
625	.5494000E+00	.546785E+00	.2651478E-02	-.57
626	.5501000E+00	.5538520E+00	-.3752036E-02	-.64
627	.2925000E+00	.2960535E+00	-.3553472E-02	-1.20
628	.3190000E+00	.3240928E+00	-.5092889E-02	-1.57
629	.3473000E+00	.3450150E+00	.2284999E-02	-.66
630	.3665000E+00	.3649332E+00	.1566807E-02	-.43
631	.3885000E+00	.3816220E+00	.69121979E-02	-.80
632	.4140000E+00	.4189008E+00	-.4900891E-02	-1.17
633	.4415000E+00	.4453437E+00	-.3843694E-02	-.86
634	.4721000E+00	.4747187E+00	-.2618651E-02	-.55
635	.5086000E+00	.5058702E+00	.2789070E-03	-.18
636	.5158000E+00	.5120436E+00	.3856399E-02	-.75
637	.5240000E+00	.5184788E+00	.5523176E-02	1.07
638	.5315000E+00	.5248694E+00	.6630640E-02	1.24
639	.5385000E+00	.5315207E+00	.6979203E-02	1.31
640	.3005000E+00	.3049180E+00	-.4415861E-02	-1.45
641	.3310000E+00	.3361968E+00	-.5196576E-02	-1.55
642	.3601000E+00	.3596031E+00	.4968141E-03	-.14
643	.3887000E+00	.3846919E+00	.4008102E-02	-.52
644	.4112000E+00	.411813E+00	-.6112231E-03	-.15
645	.4354000E+00	.4400510E+00	-.4650965E-02	-1.28
646	.4665000E+00	.4720342E+00	-.5534175E-02	-1.17
647	.5086000E+00	.5048738E+00	.3762222E-02	-.72
648	.5182000E+00	.5117770E+00	.6423016E-02	1.26
649	.5259000E+00	.5196504E+00	.7249563E-02	1.40
650	.5328000E+00	.5258935E+00	.7264490E-02	1.37

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TABLE OF RESIDUALS (TOTAL)

CASE NO.	Y VALUE	Y ESTIMATE	RESIDUAL	PERCENT VARIATION
651	.5402000E+00	.5326058E+00	.7594410E-02	1.43
652	.3082000E+00	.3081182E+00	.8162812E-03	-.26
653	.3193000E+00	.3418871E+00	-.2187127E-02	-.70
654	.3698000E+00	.3661336E+00	.3766429E-02	1.03
655	.3959000E+00	.3923652E+00	.3534813E-02	-.90
656	.4178000E+00	.4207368E+00	-.3136770E-02	-.75
657	.4460000E+00	.4512334E+00	-.5223407E-02	-1.16
658	.4797000E+00	.4837127E+00	-.4072682E-02	-.84
659	.5273000E+00	.5182620E+00	.9038022E-02	1.74
660	.5342000E+00	.5252859E+00	.8914078E-02	1.70
661	.3170000E+00	.3179355E+00	-.8854878E-03	-.18
662	.3511000E+00	.3525482E+00	-.1448219E-02	-.41
663	.4220000E+00	.3788774E+00	.4322423E-02	1.14
664	.4074000E+00	.4072191E+00	.1808885E-03	-.04
665	.4243000E+00	.4278283E+00	-.3628332E-02	-.83
666	.4667000E+00	.4708703E+00	-.4270270E-02	-.91
667	.5107000E+00	.5062548E+00	.4445354E-02	-.88
668	.5198000E+00	.5135711E+00	.6289808E-02	1.17
669	.5286000E+00	.5208721E+00	.7727877E-02	1.46
670	.3270000E+00	.3301130E+00	-.3113001E-02	-.94
671	.3821000E+00	.3871856E+00	-.5095588E-02	-1.39
672	.3875000E+00	.3857567E+00	.1742348E-02	-.44
673	.4247000E+00	.4266774E+00	-.1877582E-02	-.46
674	.4562000E+00	.4602852E+00	-.4085161E-02	-.89
675	.4940000E+00	.4965225E+00	-.2522486E-02	-.51
676	.5029000E+00	.5040752E+00	-.1175232E-02	-.23
677	.2648000E+00	.2705689E+00	-.5768946E-02	-2.13
678	.2898000E+00	.2925381E+00	-.2738100E-02	-.94
679	.3132000E+00	.3102831E+00	.3016917E-02	-.97
680	.3232000E+00	.3297966E+00	-.3503722E-02	1.06
681	.3580000E+00	.3511851E+00	.3851480E-03	-.11
682	.3722000E+00	.3743666E+00	-.2169841E-02	-.68
683	.3864000E+00	.3892506E+00	-.2850588E-02	-.71
684	.4242000E+00	.4257344E+00	-.1534446E-02	-.36
685	.4810000E+00	.4872780E+00	-.6272967E-02	-.80
686	.4574000E+00	.4595144E+00	-.2114428E-02	-.46
687	.2750000E+00	.2787767E+00	-.3786857E-02	-.84
688	.3018000E+00	.3019870E+00	-.1870085E-04	-.03
689	.3259000E+00	.3222164E+00	.3683609E-02	1.14
690	.3448000E+00	.3444132E+00	.4847916E-03	-.14
691	.3687000E+00	.3687187E+00	-.201971E-02	-.55
692	.3815000E+00	.3850466E+00	-.354688E-02	-.90
693	.4201000E+00	.4232883E+00	-.3186301E-02	-.75
694	.4525000E+00	.4533348E+00	-.8347952E-03	-.18
695	.4889000E+00	.4955512E+00	-.6631631E-03	-.14
696	.2783000E+00	.2798728E+00	-.1572584E-02	-.56
697	.3054000E+00	.3063732E+00	-.9731671E-03	-.32
698	.3212000E+00	.3278425E+00	-.355751E-02	1.09
699	.3517000E+00	.3509841E+00	.7158961E-03	-.20
700	.3748000E+00	.3785408E+00	-.3740768E-02	-.84

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TABLE OF RESIDUALS (TOTAL)

CASE NO.	Y VALUE	Y ESTIMATE	RESIDUAL	PERCENT VARIATION
701	.4014000E+00	.4042248E+00	-.2824634E-02	-.70
702	.4317000E+00	.4339204E+00	-.2220414E-02	-.51
703	.4380000E+00	.4400912E+00	-.2091165E-02	-.48
704	.4446000E+00	.4463372E+00	-.1737152E-02	-.39
705	.4517000E+00	.4526576E+00	-.9575713E-03	-.21
706	.2865000E+00	.2865570E+00	-.5702017E-04	-.02
707	.3150000E+00	.3152495E+00	-.2495077E-03	-.08
708	.3425000E+00	.3434017E+00	-.4088262E-02	1.21
709	.3654000E+00	.3638531E+00	.1546722E-02	.43
710	.3814000E+00	.3817458E+00	-.3455780E-03	-.09
711	.4209000E+00	.4216767E+00	-.1076746E-02	-.26
712	.4274000E+00	.4282922E+00	-.8922168E-03	-.21
713	.4339000E+00	.4346950E+00	-.7950271E-03	-.18
714	.4405000E+00	.4411842E+00	-.6841798E-03	-.16
715	.2987000E+00	.2965608E+00	.2139182E-02	.72
716	.3299000E+00	.3275731E+00	.2326879E-02	.71
717	.3571000E+00	.3529571E+00	.4142922E-02	1.17
718	.3831000E+00	.3809800E+00	.2112007E-02	.55
719	.4118000E+00	.4117807E+00	.1932935E-04	.00
720	.4178000E+00	.4182600E+00	-.4599408E-03	-.11
721	.4240000E+00	.4248433E+00	-.8433048E-03	-.20
722	.4307000E+00	.4315295E+00	-.8294537E-03	-.19
723	.2513000E+00	.2537022E+00	-.2202164E-02	-.87
724	.2724000E+00	.2708016E+00	.1588398E-02	.59
725	.2867000E+00	.2860250E+00	.6650385E-03	.23
726	.3021000E+00	.3032839E+00	-.1183825E-02	-.38
727	.3213000E+00	.3224809E+00	-.1280855E-02	-.40
728	.3417000E+00	.3434892E+00	-.1786219E-02	-.52
729	.3645000E+00	.3641728E+00	.1672819E-02	.46
730	.3815000E+00	.3804326E+00	.1067383E-02	.27
731	.3945000E+00	.3954651E+00	-.1034934E-02	-.26
732	.4015000E+00	.4005561E+00	.9439157E-03	.24
733	.4063000E+00	.4057050E+00	.1194968E-02	.29
734	.4125000E+00	.4109113E+00	.1588713E-02	.39
735	.4184000E+00	.4161742E+00	.2225752E-02	.53
736	.2572000E+00	.2584277E+00	-.1227743E-02	-.48
737	.2793000E+00	.2787684E+00	.1131621E-02	.41
738	.2973000E+00	.2964861E+00	.1213863E-02	.41
739	.3163000E+00	.3164204E+00	-.1203737E-03	-.04
740	.3372000E+00	.3385333E+00	-.1332900E-02	-.39
741	.3606000E+00	.3626810E+00	-.2081027E-02	-.57
742	.3880000E+00	.3887264E+00	-.7263865E-03	-.19
743	.3940000E+00	.3941524E+00	-.1524174E-03	-.04
744	.4002000E+00	.3996487E+00	.5513031E-03	.14
745	.4046000E+00	.4052144E+00	-.1385607E-02	-.34
746	.4131000E+00	.4108487E+00	.2251301E-02	.55
747	.2804000E+00	.2812426E+00	-.8425593E-03	-.22
748	.2828000E+00	.2828734E+00	-.9285740E-03	-.33
749	.3036000E+00	.3016311E+00	.1988882E-02	.65
750	.3233000E+00	.3227082E+00	.5818418E-03	.18

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TABLE OF RESIDUALS (TOTAL)

CASE NO.	Y VALUE	Y ESTIMATE	RESIDUAL	PERCENT VARIATION
751	.3451000E+00	.3480732E+00	-.9722327E-02	-.28
752	.3704000E+00	.3715780E+00	-.1177965E-02	-.32
753	.3898000E+00	.3990794E+00	.7208111E-03	.18
754	.4042000E+00	.4048080E+00	-.1391988E-02	-.34
755	.2649000E+00	.2681539E+00	-.1253865E-02	-.47
756	.2922000E+00	.2919768E+00	.2233431E-03	.08
757	.3157000E+00	.3126172E+00	.3082757E-02	.99
758	.3349000E+00	.3358042E+00	-.1095798E-02	-.33
759	.3613000E+00	.3615049E+00	-.2049145E-03	-.06
760	.3897000E+00	.3895569E+00	.1430524E-03	.04
761	.3958000E+00	.3954354E+00	.3646448E-03	.09
762	.2745000E+00	.2798458E+00	-.3345907E-02	-1.20
763	.3034000E+00	.3059885E+00	-.2588496E-02	-.85
764	.3299000E+00	.3288608E+00	.1029172E-02	.32
765	.3538000E+00	.3546272E+00	-.8271823E-03	-.23
766	.3595000E+00	.3601265E+00	-.6245018E-03	-.17
767	.3647000E+00	.3657379E+00	-.1017867E-02	-.28
768	.3701000E+00	.3714587E+00	-.1359674E-02	-.37
769	.3757000E+00	.3772903E+00	-.1580329E-02	-.42
770	.3814000E+00	.3832283E+00	-.1828252E-02	-.48

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MAXIMUM RESIDUAL (TOTAL)

CASE NO.	Y VALUE	Y ESTIMATE	RESIDUAL	PERCENT VARIATION
576	.5211000E+00	.5043416E+00	.1675836E-01	3.32

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STANDARD DEVIATION (TOTAL) = .234819741E-02
STANDARD DEVIATION (WITHIN) = .2328239423E-02

TREATMENT NO.	STANDARD DEVIATION (WITHIN)
1	.2803346997E-02
2	.1812706065E-02

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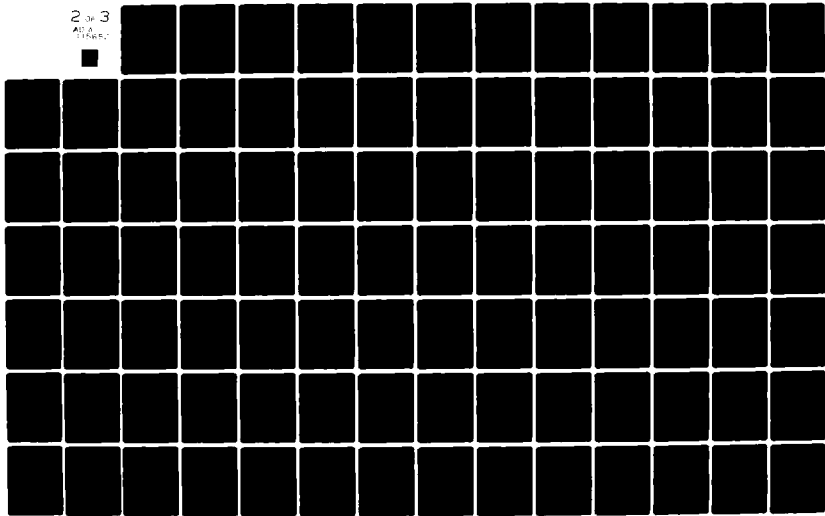
NAVAL AIR DEVELOPMENT CENTER WARMINSTER PA SENSORS A--ETC F/G 12/1
ANALYSIS OF COVARIANCE COMPUTER PROGRAM WITH MULTIPLE COVARIATE--ETC(U)
APR 82 J J FRANZ

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TRANSGENERATED
DATA INPUT

CASE NUMBER	GROUP NUMBER	CASE NUMBER	GROUP NUMBER	CASE NUMBER	GROUP NUMBER
.128852E-02	.649841E-01	.500000E+02	.545545E+01	.108101E+00	.409846E-03
.377864E+00	.250000E+04	.324730E+010	.0	.0	.857500E+06
.4123937E-010	.0	.4455303E+000	.0	.1715000E+050	.0
0	.0	.3285000E+00	.0	.0	.0
CASE NUMBER	2	CASE NUMBER	3	CASE NUMBER	4
.1535534E+00	.176776E-02	.500000E+02	.3535534E+02	.7071088E+00	.1236306E+000
.377864E+00	.250000E+04	.883835E+010	.0	.0	.857500E+06
.2672612E-000	.0	.1212688E+030	.0	.1715000E+050	.0
0	.0	.3436000E+00	.0	.0	.0
CASE NUMBER	3	CASE NUMBER	4	CASE NUMBER	5
.1035926E-01	.5179630E-02	.500000E+02	.5059174E-02	.1011835E+01	.3915432E+000
.377864E+00	.250000E+04	.2599815E+040	.0	.0	.857500E+06
.3824376E+000	.0	.3553226E+030	.0	.1715000E+050	.0
0	.0	.3405000E+00	.0	.0	.0
CASE NUMBER	4	CASE NUMBER	5	CASE NUMBER	6
.1837117E-01	.9185587E-02	.500000E+02	.6123724E-02	.1224745E-01	.6942651E+000
.377864E+00	.250000E+04	.4592793E+040	.0	.0	.857500E+06
.4629100E+000	.0	.6201312E+030	.0	.1715000E+050	.0
0	.0	.3802000E+00	.0	.0	.0
CASE NUMBER	5	CASE NUMBER	6	CASE NUMBER	7
.2628477E-01	.1414214E-03	.500000E+02	.7071088E+02	.1414214E-01	.1069045E+010
.377864E+00	.250000E+04	.7671048E+040	.0	.0	.857500E+06
.5345235E+000	.0	.8701505E+030	.0	.1715000E+050	.0
0	.0	.4021000E+00	.0	.0	.0
CASE NUMBER	6	CASE NUMBER	7	CASE NUMBER	8
.2852847E-01	.1876424E-03	.500000E+02	.7905694E-02	.1581139E-01	.1494036E+010
.377864E+00	.250000E+04	.9882118E+040	.0	.0	.857500E+06
.5978143E+000	.0	.1355827E+040	.0	.1715000E+050	.0
0	.0	.4315000E+00	.0	.0	.0
CASE NUMBER	7	CASE NUMBER	8	CASE NUMBER	9
.5198152E-01	.2598076E-03	.500000E+02	.8660254E-02	.1732051E-01	.1983961E+010
.377864E+00	.250000E+04	.1298038E+050	.0	.0	.857500E+06
.6546537E+000	.0	.1782280E+040	.0	.1715000E+050	.0
0	.0	.4661000E+00	.0	.0	.0
CASE NUMBER	8	CASE NUMBER	9	CASE NUMBER	10
.6547900E-01	.3273950E-03	.500000E+02	.9354143E-02	.1870829E-01	.2474874E+010
.377864E+00	.250000E+04	.1826975E+050	.0	.0	.857500E+06
.7071088E+000	.0	.2245930E+040	.0	.1715000E+050	.0
0	.0	.5010000E+00	.0	.0	.0

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DATA INPUT

CASE NUMBER	9	CASE NUMBER	10	CASE NUMBER	11
.8000000E-01	.4000000E-03	.5000000E+02	.1000000E+03	.2000000E+01	.3023716E+010
.377864E+00	.2500000E+04	.2000000E+050	.0	.0	.8575000E+06
.7559289E+000	.0	.2744000E+040	.0	.1715000E+050	.0
0	.0	.5415000E+00	.0	.0	.0
CASE NUMBER	10	CASE NUMBER	11	CASE NUMBER	12
.8019857E-01	.4150934E-03	.5000000E+02	.1012423E-03	.2024846E-01	.3137811E+010
.377864E+00	.2500000E+04	.2075467E+050	.0	.0	.8575000E+06
.7653197E+000	.0	.2847540E+040	.0	.1715000E+050	.0
0	.0	.5481000E+00	.0	.0	.0
CASE NUMBER	11	CASE NUMBER	12	CASE NUMBER	13
.8607439E-01	.4303719E-03	.5000000E+02	.1024695E-03	.2048390E-01	.3253206E+010
.377864E+00	.2500000E+04	.2151840E+050	.0	.0	.8575000E+06
.7745967E+000	.0	.2952351E+040	.0	.1715000E+050	.0
0	.0	.5504000E+00	.0	.0	.0
CASE NUMBER	12	CASE NUMBER	13	CASE NUMBER	14
.8916670E-01	.4458235E-03	.5000000E+02	.1036822E-03	.2073644E-01	.3370184E+010
.377864E+00	.2500000E+04	.2229167E+050	.0	.0	.8575000E+06
.7837638E+000	.0	.3058418E+040	.0	.1715000E+050	.0
0	.0	.5501000E+00	.0	.0	.0
CASE NUMBER	13	CASE NUMBER	14	CASE NUMBER	15
.8229518E-01	.4614759E-03	.5000000E+02	.1048809E-03	.2097818E-01	.3488430E+010
.377864E+00	.2500000E+04	.2307378E+050	.0	.0	.8575000E+06
.7928250E+000	.0	.3165723E+040	.0	.1715000E+050	.0
0	.0	.5538000E+00	.0	.0	.0
CASE NUMBER	14	CASE NUMBER	15	CASE NUMBER	16
.8223333E-000	.0	.5000000E+020	.0	.0	.0
.0	.0	.2500000E+040	.0	.0	.0
.0	.0	.0	.0	.0	.0
.0	.0	.3288000E+00	.0	.3645000E+050	.7290000E+03
CASE NUMBER	15	CASE NUMBER	16	CASE NUMBER	17
.3535534E+00	.176776E-02	.5000000E+02	.3535534E+02	.7071088E+00	.1178511E+000
.3333333E+000	.2500000E+04	.822825E+020	.0	.0	.1822500E+07
.2357023E+000	.0	.3577404E+030	.0	.3645000E+050	.0
0	.0	.3458000E+00	.0	.0	.0
CASE NUMBER	16	CASE NUMBER	17	CASE NUMBER	18
.1000000E-01	.5000000E-02	.5000000E+02	.5000000E+02	.1000000E-01	.3333333E+000
.3333333E+000	.2500000E+04	.5000000E+040	.0	.0	.1822500E+07
.3333333E+000	.0	.7290000E+030	.0	.3645000E+050	.0
0	.0	.3704000E+00	.0	.0	.0

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DATA INPUT
CASE NUMBER 17
.1827117E+01 .9185587E+02 .5000000E-02 .6123724E+02 .1224745E+01 .6123724E+00 .7290000E+03
.3333333E+00 .2500000E-04 .4582793E-040 .0. .1822500E-07 .1666667E-02
.4082483E-000 .0. .3989000E+00 .-.3645000E+050 .0.
0 .0 .0 .0 .0 .0 .0
CASE NUMBER 18
.2828427E+01 .1414214E+03 .5000000E-02 .7071068E+02 .1414214E+01 .8428090E+000 .7290000E+03
.3333333E+00 .2500000E-04 .7071068E-040 .0. .1822500E-07 .1666667E-02
.4714045E+000 .0. .4296000E+00 .-.3645000E+050 .0.
0 .0 .0 .0 .0 .0 .0
CASE NUMBER 19
.3952847E+01 .1576424E+03 .5000000E-02 .7905694E+02 .1581139E+01 .1317616E+010 .7290000E+03
.3333333E+00 .2500000E-04 .9882118E-040 .0. .1822500E-07 .1666667E-02
.5270483E-000 .0. .4608000E+00 .-.3645000E+050 .0.
0 .0 .0 .0 .0 .0 .0
CASE NUMBER 20
.5198152E+01 .2598076E+03 .5000000E-02 .8660254E+02 .1732051E+01 .1732051E+010 .7290000E+03
.3333333E+00 .2500000E-04 .1299038E-050 .0. .1822500E-07 .1666667E-02
.5772803E+000 .0. .4952000E+00 .-.3645000E+050 .0.
0 .0 .0 .0 .0 .0 .0
CASE NUMBER 21
.6547900E+01 .3272950E+03 .5000000E-02 .9334142E+02 .1870829E+01 .2182633E+010 .7290000E+03
.3333333E+00 .2500000E-04 .1636975E-050 .0. .1822500E-07 .1666667E-02
.6226096E-000 .0. .4772415E-040 .-.3645000E+050 .0.
0 .0 .0 .0 .0 .0 .0
CASE NUMBER 22
.8830520E+01 .3415260E+03 .5000000E-02 .9486833E+02 .1897367E+01 .2278440E+010 .7290000E+03
.3333333E+00 .2500000E-04 .1707630E-050 .0. .1822500E-07 .1666667E-02
.8324555E+000 .0. .4979449E+040 .-.3645000E+050 .0.
0 .0 .0 .0 .0 .0 .0
CASE NUMBER 23
.7117092E+01 .3558546E+03 .5000000E-02 .9617692E+02 .1923538E+01 .2372364E+010 .7290000E+03
.3333333E+00 .2500000E-04 .1778272E-050 .0. .1822500E-07 .1666667E-02
.6411795E-000 .0. .5188360E+040 .-.3645000E+050 .0.
0 .0 .0 .0 .0 .0 .0
CASE NUMBER 24
.7467564E+01 .3702782E+03 .5000000E-02 .9746794E+02 .1949359E+01 .2489188E+010 .7290000E+03
.3333333E+00 .2500000E-04 .1851891E-050 .0. .1822500E-07 .1666667E-02
.6487863E-000 .0. .5400114E+040 .-.3645000E+050 .0.
0 .0 .0 .0 .0 .0 .0

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TRANSGENERATED
DATA INPUT
CASE NUMBER 25
.7701892E+01 .3850947E+03 .5000000E-02 .9874209E+02 .1974842E+01 .2567294E+010 .7290000E+03
.3333333E+00 .2500000E-04 .1925471E-050 .0. .1822500E-07 .1666667E-02
.6828081E+000 .0. .5614672E-040 .-.3645000E+050 .0.
0 .0 .0 .0 .0 .0 .0
CASE NUMBER 26
.3162278E+000 .5000000E-020 .0 .0 .0 .0 .1000000E+04
.0 .0 .2500000E-040 .0 .0 .2500000E+07 .1581139E-02
.0 .0 .3320000E+00 .-.5000000E+050 .0.
0 .0 .0 .0 .0 .0 .0
CASE NUMBER 27
.2823399E+00 .1461685E+03 .5000000E-02 .3318419E+02 .8636838E+00 .9244505E+010 .1000000E+04
.3162278E+000 .2500000E-04 .7308423E-030 .0. .2500000E-07 .1581139E-02
.2098752E+000 .0. .2823389E-030 .-.5000000E+050 .0.
0 .0 .0 .0 .0 .0 .0
CASE NUMBER 28
.1000000E+01 .5000000E-02 .5000000E-02 .5000000E+02 .1000000E+01 .3162278E+000 .1000000E+04
.3162278E+000 .2500000E-04 .2500000E-040 .0. .2500000E-07 .1581139E-02
.3162278E-000 .0. .1000000E+040 .-.5000000E+050 .0.
0 .0 .0 .0 .0 .0 .0
CASE NUMBER 29
.1827117E+01 .9185587E+02 .5000000E-02 .6123724E+02 .1224745E+01 .6089475E+000 .1000000E+04
.3162278E+000 .2500000E-04 .4582793E-040 .0. .2500000E-07 .1581139E-02
.3872983E-000 .0. .1827117E-040 .-.5000000E+050 .0.
0 .0 .0 .0 .0 .0 .0
CASE NUMBER 30
.2828427E+01 .1414214E+03 .5000000E-02 .7071068E+02 .1414214E+01 .8944272E+000 .1000000E+04
.3162278E+000 .2500000E-04 .7071068E-040 .0. .2500000E-07 .1581139E-02
.4472135E+000 .0. .2828427E-040 .-.5000000E+050 .0.
0 .0 .0 .0 .0 .0 .0
CASE NUMBER 31
.2828738E+01 .1968369E+03 .5000000E-02 .7896277E+02 .1578255E+01 .1245538E+010 .1000000E+04
.3162278E+000 .2500000E-04 .9846845E-040 .0. .2500000E-07 .1581139E-02
.4994044E+000 .0. .3938738E-040 .-.5000000E+050 .0.
0 .0 .0 .0 .0 .0 .0
CASE NUMBER 32
.5198152E+01 .2598076E+03 .5000000E-02 .8660254E+02 .1732051E+01 .1643168E+010 .1000000E+04
.3162278E+000 .2500000E-04 .1299038E-050 .0. .2500000E-07 .1581139E-02
.5477226E-000 .0. .5198152E-040 .-.5000000E+050 .0.
0 .0 .0 .0 .0 .0 .0

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TRANSGENERATED
DATA INPUT
CASE NUMBER 33
.6547900E+01 .3273950E+03 .5000000E+02 .9354143E+02 .1870829E+01 .2070620E+010 .1000000E+04
.3162278E+000 .2500000E+04 .1436975E+050 .0 .2500000E+07 .1581139E+02
.5918080E+000 .0 .6547900E+040 .5000000E+050 .0 .0 .0
0 .0 .3499000E+000
CASE NUMBER 34
.6830520E+01 .3415260E+03 .5000000E+02 .9488833E+02 .1897367E+01 .2160000E+010 .1000000E+04
.3162278E+000 .2500000E+04 .1707630E+050 .0 .2500000E+07 .1581139E+02
.6000000E+000 .0 .6830520E+040 .5000000E+050 .0 .0 .0
0 .0 .5510000E+000
CASE NUMBER 35
.7117092E+01 .3585466E+03 .5000000E+02 .9617692E+02 .1923538E+01 .2250622E+010 .1000000E+04
.3162278E+000 .2500000E+04 .1779273E+050 .0 .2500000E+07 .1581139E+02
.6082763E+000 .0 .7117092E+040 .5000000E+050 .0 .0 .0
0 .0 .5581000E+000
CASE NUMBER 36
.0 .0 .5000000E+020 .0 .0 .0 .1728000E+04
.2886751E+000 .2500000E+040 .0 .0 .4320000E+07 .1443376E+02
.0 .0 .0 .8640000E+050 .0 .0 .0
0 .0 .3453000E+000
CASE NUMBER 37
.3525534E+00 .1767767E+02 .5000000E+02 .3525534E+02 .7071068E+00 .1020621E+000 .1728000E+04
.2886751E+000 .2500000E+04 .8828335E+030 .0 .4320000E+07 .1443376E+02
.2041241E+000 .0 .6109403E+030 .8640000E+050 .0 .0 .0
0 .0 .3728000E+000
CASE NUMBER 38
.1000000E+01 .5000000E+02 .5000000E+02 .5000000E+02 .1000000E+01 .2886751E+000 .1728000E+04
.2886751E+000 .2500000E+04 .2500000E+040 .0 .4320000E+07 .1443376E+02
.2886751E+000 .0 .1728000E+040 .8640000E+050 .0 .0 .0
0 .0 .4011000E+000
CASE NUMBER 39
.1837117E+01 .9185587E+02 .5000000E+02 .6123724E+02 .1224745E+01 .5303301E+000 .1728000E+04
.2886751E+000 .2500000E+04 .8827833E+040 .0 .4320000E+07 .1443376E+02
.3525534E+000 .0 .3174529E+040 .8640000E+050 .0 .0 .0
0 .0 .4282000E+000
CASE NUMBER 40
.2886751E+01 .1414214E+03 .5000000E+02 .7071068E+02 .1414214E+01 .8184868E+000 .1728000E+04
.2886751E+000 .2500000E+04 .7071068E+040 .0 .4320000E+07 .1443376E+02
.4082483E+000 .0 .4887522E+040 .8640000E+050 .0 .0 .0
0 .0 .4588000E+000
    
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TRANSGENERATED
DATA INPUT
CASE NUMBER 41
.3952847E+01 .1978424E+03 .5000000E+02 .7905894E+02 .1581139E+01 .1141088E+010 .1728000E+04
.2886751E+000 .2500000E+04 .882118E+040 .0 .4320000E+07 .1443376E+02
.4564255E+000 .0 .6830520E+040 .8640000E+050 .0 .0 .0
0 .0 .4941000E+000
CASE NUMBER 42
.5198152E+01 .2598078E+03 .5000000E+02 .8660254E+02 .1732051E+01 .1500000E+010 .1728000E+04
.2886751E+000 .2500000E+04 .1289039E+050 .0 .4320000E+07 .1443376E+02
.5000000E+000 .0 .8978951E+040 .8640000E+050 .0 .0 .0
0 .0 .5641000E+000
CASE NUMBER 43
.5458113E+01 .2729057E+03 .5000000E+02 .8803408E+02 .1760682E+01 .1575822E+010 .1728000E+04
.2886751E+000 .2500000E+04 .1264528E+050 .0 .4320000E+07 .1443376E+02
.5082650E+000 .0 .9431620E+040 .8640000E+050 .0 .0 .0
0 .0 .5490000E+000
CASE NUMBER 44
.5724324E+01 .2982167E+03 .5000000E+02 .8944272E+02 .1788854E+01 .1652473E+010 .1728000E+04
.2886751E+000 .2500000E+04 .1431084E+050 .0 .4320000E+07 .1443376E+02
.5163578E+000 .0 .8891848E+040 .8640000E+050 .0 .0 .0
0 .0 .5503000E+000
CASE NUMBER 45
.0 .0 .5000000E+020 .0 .0 .0 .3048625E+04
.2826129E+000 .2500000E+040 .0 .0 .7821582E+07 .1313064E+02
.0 .0 .0 .1524313E+060 .0 .0 .0
0 .0 .3618000E+000
CASE NUMBER 46
.3588858E+00 .1799428E+02 .5000000E+02 .3556517E+02 .7113032E+00 .9451058E+010 .3048625E+04
.2826129E+000 .2500000E+04 .8897140E+030 .0 .7821582E+07 .1313064E+02
.1867974E+000 .0 .1097168E+040 .1524313E+060 .0 .0 .0
0 .0 .3895000E+000
CASE NUMBER 47
.1063147E+01 .5315733E+02 .5000000E+02 .5103104E+02 .1020621E+01 .2791960E+000 .3048625E+04
.2826129E+000 .2500000E+04 .2657867E+040 .0 .7821582E+07 .1313064E+02
.2880291E+000 .0 .2241125E+040 .1524313E+060 .0 .0 .0
0 .0 .4200000E+000
CASE NUMBER 48
.1084899E+01 .5884044E+02 .5000000E+02 .5835680E+02 .1192738E+01 .4458038E+000 .3048625E+04
.2826129E+000 .2500000E+04 .4242022E+040 .0 .7821582E+07 .1313064E+02
.3132278E+000 .0 .5172834E+040 .1524313E+060 .0 .0 .0
0 .0 .4440000E+000
    
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TRANSGENERATED
DATA INPUT
CASE NUMBER 49
.2828427E+01 .1414214E+03 .5000000E+02 .7071068E+02 .1414214E+01 .7427874E+000 .3048825E+04
.2626128E+000 .2500000E+04 .7071068E+040 .0. .7621562E+07 .1313064E+02
.3713907E+000 .0. .8622814E+040 .1524313E+060 .0.
0. 0. .4850000E+00
CASE NUMBER 50
.3952847E+01 .1976424E+03 .5000000E+02 .7005694E+02 .1581139E+01 .1038068E+010 .3048825E+04
.2626128E+000 .2500000E+04 .882118E+040 .0. .7621562E+07 .1313064E+02
.4152270E+000 .0. .1205075E+050 .1524313E+060 .0.
0. 0. .5252000E+00
CASE NUMBER 51
.4182374E+01 .2096187E+03 .5000000E+02 .8062258E+02 .1612452E+01 .1100871E+010 .3048825E+04
.2626128E+000 .2500000E+04 .1048094E+050 .0. .7621562E+07 .1313064E+02
.4234505E+000 .0. .1278098E+050 .1524313E+060 .0.
0. 0. .5253000E+00
CASE NUMBER 52
0. 0. 0. 0. 0. 0. .3430000E+03
.3779845E+000 0. 0. 0. 0. 0. 0.
0. 0. 0. 0. 0. 0. 0.
0. 0. .2888000E+00
CASE NUMBER 53
.3535534E+000 .0. 0. .7071068E+00 .1336306E+000 .3430000E+03
.3779845E+000 .0. 0. 0. 0. 0. 0.
.2672612E+000 .0. 0. .1212688E+030 .0. 0. 0.
0. 0. .3170000E+00
CASE NUMBER 54
.1000000E+010 .0. 0. .1000000E+01 .3779845E+000 .3430000E+03
.3779845E+000 .0. 0. 0. 0. 0. 0.
.3779845E+000 .3430000E+030 .0. 0. 0.
0. 0. .3245000E+00
CASE NUMBER 55
.1761105E+010 .0. 0. .1207615E+01 .6656350E+000 .3430000E+03
.3779845E+000 .0. 0. 0. 0. 0. 0.
.6564355E+000 .0. 0. .6040588E+030 .0. 0. 0.
0. 0. .3545000E+00
CASE NUMBER 56
.2828427E+010 .0. 0. .1414214E+01 .1069045E+010 .3430000E+03
.3779845E+000 .0. 0. 0. 0. 0. 0.
.5345225E+000 .0. 0. .8701505E+030 .0. 0. 0.
0. 0. .3818000E+00
    
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TRANSGENERATED
DATA INPUT
CASE NUMBER 57
.2852847E+010 .0. 0. .1581139E+01 .1494038E+010 .3430000E+03
.3779845E+000 .0. 0. 0. 0. 0. 0.
.5876143E+000 .0. .135827E+040 .0. 0. 0.
0. 0. .4091000E+00
CASE NUMBER 58
.5242815E+010 .0. 0. .1737198E+01 .1981522E+010 .3430000E+03
.3779845E+000 .0. 0. 0. 0. 0. 0.
.6565911E+000 .0. .1798217E+040 .0. 0. 0.
0. 0. .4375000E+00
CASE NUMBER 59
.6547800E+010 .0. 0. .1870828E+01 .2474874E+010 .3430000E+03
.3779845E+000 .0. 0. 0. 0. 0. 0.
.7071068E+000 .0. .2245830E+040 .0. 0. 0.
0. 0. .4667000E+00
CASE NUMBER 60
.8000000E+010 .0. 0. .2000000E+01 .3023716E+010 .3430000E+03
.3779845E+000 .0. 0. 0. 0. 0. 0.
.7559288E+000 .0. .2744000E+040 .0. 0. 0.
0. 0. .4980000E+00
CASE NUMBER 61
.8201847E+010 .0. 0. .2024646E+01 .3137811E+010 .3430000E+03
.3779845E+000 .0. 0. 0. 0. 0. 0.
.7853197E+000 .0. .2847540E+040 .0. 0. 0.
0. 0. .5029000E+00
CASE NUMBER 62
.8607439E+010 .0. 0. .2048280E+01 .3253106E+010 .3430000E+03
.3779845E+000 .0. 0. 0. 0. 0. 0.
.7745987E+000 .0. .2852351E+040 .0. 0. 0.
0. 0. .5190000E+00
CASE NUMBER 63
.8916870E+010 .0. 0. .2073644E+01 .3370186E+010 .3430000E+03
.3779845E+000 .0. 0. 0. 0. 0. 0.
.7837628E+000 .0. .3058418E+040 .0. 0. 0.
0. 0. .5192000E+00
CASE NUMBER 64
0. 0. 0. 0. 0. 0. .7290000E+03
.3333333E+000 .0. 0. 0. 0. 0. 0.
0. 0. 0. 0. 0. 0. 0.
0. 0. .1038000E+00
    
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TRANSGENERATED
DATA INPUT
CASE NUMBER 65
.353534E+000 0. 0. 0. 7071088E+00 .117811E+000 .729000E+03
.333333E+000 0. 0. 0. 0. 0. 0.
.2357021E+000 0. 0. 0. 2377494E+030 0. 0.
0. 0. 0. 3272000E+00
CASE NUMBER 66
.100000E+010 0. 0. 0. 1000000E+01 .333333E+000 .729000E+03
.333333E+000 0. 0. 0. 0. 0. 0.
.333333E+000 0. 0. 0. 7290000E+030 0. 0.
0. 0. 0. 3527000E+00
CASE NUMBER 67
.1937117E+010 0. 0. 0. 1224745E+01 .6123724E+000 .729000E+03
.333333E+000 0. 0. 0. 0. 0. 0.
.4082463E+000 0. 0. 0. 1339259E+040 0. 0.
0. 0. 0. 3778000E+00
CASE NUMBER 68
.2828427E+010 0. 0. 0. 1414214E+01 .9428090E+000 .729000E+03
.333333E+000 0. 0. 0. 0. 0. 0.
.4714045E+000 0. 0. 0. 2061923E+040 0. 0.
0. 0. 0. 4078000E+00
CASE NUMBER 69
.3952847E+010 0. 0. 0. 1581139E+01 .1317818E+010 .729000E+03
.333333E+000 0. 0. 0. 0. 0. 0.
.5270463E+000 0. 0. 0. 2891626E+040 0. 0.
0. 0. 0. 4279000E+00
CASE NUMBER 70
.5196152E+010 0. 0. 0. 1732051E+01 .1732051E+010 .729000E+03
.333333E+000 0. 0. 0. 0. 0. 0.
.5773502E+000 0. 0. 0. 3787895E+040 0. 0.
0. 0. 0. 4579000E+00
CASE NUMBER 71
.8547900E+010 0. 0. 0. 1870829E+01 .218233E+010 .729000E+03
.333333E+000 0. 0. 0. 0. 0. 0.
.6236996E+000 0. 0. 0. 4773419E+040 0. 0.
0. 0. 0. 4978000E+00
CASE NUMBER 72
.6830520E+010 0. 0. 0. 1897367E+01 .2278840E+010 .729000E+03
.333333E+000 0. 0. 0. 0. 0. 0.
.8324555E+000 0. 0. 0. 4974489E+040 0. 0.
0. 0. 0. 5044000E+00
    
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TRANSGENERATED
DATA INPUT
CASE NUMBER 73
.7170992E+010 0. 0. 0. 1923538E+01 .2372364E+010 .729000E+03
.333333E+000 0. 0. 0. 0. 0. 0.
.6411795E+000 0. 0. 0. 5188360E+040 0. 0.
0. 0. 0. 5117000E+00
CASE NUMBER 74
.3182278E+000 0. 0. 0. 0. 0. 0. 1000000E+04
0. 0. 0. 0. 0. 0. 0.
0. 0. 0. 3128000E+00
CASE NUMBER 75
.353534E+000 0. 0. 0. 0. 0. 0. 1000000E+04
.3182278E+000 0. 0. 0. 0. 0. 0. 0.
.2236068E+000 0. 0. 0. 353534E+030 0. 0. 0.
0. 0. 0. 336000E+00
CASE NUMBER 76
.1000000E+010 0. 0. 0. 0. 1000000E+01 .3182278E+000 .1000000E+04
.3182278E+000 0. 0. 0. 0. 0. 0. 0.
.3182278E+000 0. 0. 0. 1000000E+040 0. 0. 0.
0. 0. 0. 3815000E+00
CASE NUMBER 77
.1837117E+010 0. 0. 0. 0. 1224745E+01 .5809475E+000 .1000000E+04
.3182278E+000 0. 0. 0. 0. 0. 0. 0.
.3872983E+000 0. 0. 0. 1837117E+040 0. 0. 0.
0. 0. 0. 3844000E+00
CASE NUMBER 78
.2828427E+010 0. 0. 0. 0. 1414214E+01 .884272E+000 .1000000E+04
.3182278E+000 0. 0. 0. 0. 0. 0. 0.
.4472138E+000 0. 0. 0. 2828427E+040 0. 0. 0.
0. 0. 0. 4101000E+00
CASE NUMBER 79
.3952847E+010 0. 0. 0. 0. 1581139E+01 .1250000E+010 .1000000E+04
.3182278E+000 0. 0. 0. 0. 0. 0. 0.
.5000000E+000 0. 0. 0. 3952847E+040 0. 0. 0.
0. 0. 0. 4384000E+00
CASE NUMBER 80
.5196152E+010 0. 0. 0. 0. 1732051E+01 .1643168E+010 .1000000E+04
.3182278E+000 0. 0. 0. 0. 0. 0. 0.
.5477226E+000 0. 0. 0. 5196152E+040 0. 0. 0.
0. 0. 0. 4719000E+00
    
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TRANSGENERATED
DATA INPUT
CASE NUMBER 81
.5458113E+010 0. 0. 0. 1760682E+01 1726097E+010. 1000000E+04
.3162278E+000 0. 0. 0. 0. 0. 0.
.5587704E+000 0. 0. 0. 5458113E+040 0. 0. 0.
0. 0. 0. 4802000E+00

CASE NUMBER 82
.5724234E+010 0. 0. 0. 1788954E+01 1810193E+010. 1000000E+04
.3162278E+000 0. 0. 0. 0. 0. 0.
.5656854E+000 0. 0. 0. 3724234E+040 0. 0. 0.
0. 0. 0. 4891000E+00

CASE NUMBER 83
.5994748E+010 0. 0. 0. 1816590E+01 1895706E+010. 1000000E+04
.3162278E+000 0. 0. 0. 0. 0. 0.
.5744563E+000 0. 0. 0. 5994748E+040 0. 0. 0.
0. 0. 0. 4878000E+00

CASE NUMBER 84
.6269290E+010 0. 0. 0. 1842809E+01 1922524E+010. 1000000E+04
.3162278E+000 0. 0. 0. 0. 0. 0.
.5830952E+000 0. 0. 0. 6269290E+040 0. 0. 0.
0. 0. 0. 5061000E+00

CASE NUMBER 85
.6547900E+010 0. 0. 0. 1870829E+01 2070828E+010. 1000000E+04
.3162278E+000 0. 0. 0. 0. 0. 0.
.5916060E+000 0. 0. 0. 6547900E+040 0. 0. 0.
0. 0. 0. 5132000E+00

CASE NUMBER 86
.1288922E+020 0. 0. 0. 1091091E+00 3749666E+030. 1728000E+04
.2886751E+000 0. 0. 0. 0. 0. 0.
.3149709E+010 0. 0. 0. 2244538E+010 0. 0. 0.
0. 0. 0. 2280000E+00

CASE NUMBER 87
.3535534E+000 0. 0. 0. 7071048E+00 1020821E+000. 1728000E+04
.2886751E+000 0. 0. 0. 0. 0. 0.
.2041241E+000 0. 0. 0. 5109403E+020 0. 0. 0.
0. 0. 0. 3472000E+00

CASE NUMBER 88
.1000000E+010 0. 0. 0. 1000000E+01 2886751E+000. 1728000E+04
.2886751E+000 0. 0. 0. 0. 0. 0.
.288791E+000 0. 0. 0. 1728000E+040 0. 0. 0.
0. 0. 0. 3727000E+00

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TRANSGENERATED
DATA INPUT
CASE NUMBER 89
.1827117E+010 0. 0. 0. 1224745E+01 5302301E+000. 1728000E+04
.2886751E+000 0. 0. 0. 0. 0. 0.
.3535534E+000 0. 0. 0. 3174539E+040 0. 0. 0.
0. 0. 0. 3897000E+00

CASE NUMBER 90
.2828427E+010 0. 0. 0. 1414214E+01 8164966E+000. 1728000E+04
.2886751E+000 0. 0. 0. 0. 0. 0.
.4082483E+000 0. 0. 0. 4887522E+040 0. 0. 0.
0. 0. 0. 4267000E+00

CASE NUMBER 91
.3952847E+010 0. 0. 0. 1581139E+01 1141089E+010. 1728000E+04
.2886751E+000 0. 0. 0. 0. 0. 0.
.4564355E+000 0. 0. 0. 4830520E+040 0. 0. 0.
0. 0. 0. 4596000E+00

CASE NUMBER 92
.4182374E+010 0. 0. 0. 1612452E+01 1210234E+010. 1728000E+04
.2886751E+000 0. 0. 0. 0. 0. 0.
.4654747E+000 0. 0. 0. 7244422E+040 0. 0. 0.
0. 0. 0. 4670000E+00

CASE NUMBER 93
.4436553E+010 0. 0. 0. 1643168E+01 1280722E+010. 1728000E+04
.2886751E+000 0. 0. 0. 0. 0. 0.
.4743418E+000 0. 0. 0. 7866363E+040 0. 0. 0.
0. 0. 0. 4741000E+00

CASE NUMBER 94
.4685296E+010 0. 0. 0. 1673320E+01 1352526E+010. 1728000E+04
.2886751E+000 0. 0. 0. 0. 0. 0.
.4820459E+000 0. 0. 0. 8086192E+040 0. 0. 0.
0. 0. 0. 4822000E+00

CASE NUMBER 95
.4928522E+010 0. 0. 0. 1702039E+01 1425629E+010. 1728000E+04
.2886751E+000 0. 0. 0. 0. 0. 0.
.4915960E+000 0. 0. 0. 8532788E+040 0. 0. 0.
0. 0. 0. 4812000E+00

CASE NUMBER 96
.5196152E+010 0. 0. 0. 1732051E+01 1500000E+010. 1728000E+04
.2886751E+000 0. 0. 0. 0. 0. 0.
.5000000E+000 0. 0. 0. 8878851E+040 0. 0. 0.
0. 0. 0. 5012000E+00

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TRANSGENERATED
DATA INPUT

CASE NUMBER			GROUP NUMBER	
0	0.	0.	0.	.3048625E+04
.2626129E+000	0.	0.	0.	0.
0.	0.	0.	0.	0.
0.	0.	.3284000E+00		
CASE NUMBER 98			GROUP NUMBER	
.353534E+000	0.	0.	7071088E+00 .8284767E+010	.3048625E+04
.2626129E+000	0.	0.	0.	0.
.1856953E+000	0.	0.	.1077852E+040	0.
0.	0.	0.	.3623000E+00	0.
CASE NUMBER 99			GROUP NUMBER	
.1000000E+010	0.	0.	1000000E+01 .2626129E+000	.3048625E+04
.2626129E+000	0.	0.	0.	0.
.2626129E+000	0.	0.	.3048625E+040	0.
0.	0.	0.	.3800000E+00	0.
CASE NUMBER 100			GROUP NUMBER	
.1827172E+010	0.	0.	.1224745E+01 .4824506E+000	.3048625E+04
.2626129E+000	0.	0.	0.	0.
.3276338E+000	0.	0.	.5800682E+040	0.
0.	0.	0.	.4171000E+00	0.
CASE NUMBER 101			GROUP NUMBER	
.2828427E+010	0.	0.	.1414214E+01 .7427814E+000	.3048625E+04
.2626129E+000	0.	0.	0.	0.
.3713907E+000	0.	0.	.8622814E+040	0.
0.	0.	0.	.4491000E+00	0.
CASE NUMBER 102			GROUP NUMBER	
.3043189E+010	0.	0.	.1449138E+01 .7991806E+000	.3048625E+04
.2626129E+000	0.	0.	0.	0.
.3805822E+000	0.	0.	.8277542E+040	0.
0.	0.	0.	.4558000E+00	0.
CASE NUMBER 103			GROUP NUMBER	
.3283127E+010	0.	0.	.1483240E+01 .8569392E+000	.3048625E+04
.2626129E+000	0.	0.	0.	0.
.3895178E+000	0.	0.	.9948052E+040	0.
0.	0.	0.	.4634000E+00	0.
CASE NUMBER 104			GROUP NUMBER	
.3488123E+010	0.	0.	.1516575E+01 .9160259E+000	.3048625E+04
.2626129E+000	0.	0.	0.	0.
.3982721E+000	0.	0.	.1063388E+050	0.
0.	0.	0.	.4712000E+00	0.

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TRANSGENERATED
DATA INPUT

CASE NUMBER			GROUP NUMBER	
0	0.	0.	0.	.3048625E+04
.3718094E+010	0.	0.	.1548193E+01 .9784114E+000	.3048625E+04
.2626129E+000	0.	0.	0.	0.
.4068931E+000	0.	0.	.1138488E+050	0.
0.	0.	0.	.4791000E+00	0.
CASE NUMBER 106			GROUP NUMBER	
0.	.1000000E+030	0.	0.	.3430000E+03
.3779845E+000	.1000000E+050	0.	0.	.3430000E+07 .3779845E+02
0.	0.	0.	0.	0.
0.	0.	.2671000E+00	.3430000E+050	0.
CASE NUMBER 107			GROUP NUMBER	
.3525524E+00	.3525534E+02	.1000000E+03	.7071088E+02 .7071088E+00 .1326306E+000	.3430000E+03
.3779845E+000	0.	.1000000E+05	.3535834E+040	.3430000E+07 .3779845E+02
.2672612E+000	0.	0.	.1212688E+030	0.
0.	0.	0.	.2861000E+00	.3430000E+050
CASE NUMBER 108			GROUP NUMBER	
.1000000E+01	.1000000E+03	.1000000E+03	.1000000E+03 .1000000E+01 .3779845E+000	.3430000E+03
.3779845E+000	0.	.1000000E+05	.1000000E+030	.3430000E+07 .3779845E+02
.3779845E+000	0.	0.	.3430000E+030	0.
0.	0.	0.	.3848000E+00	0.
CASE NUMBER 109			GROUP NUMBER	
.1827172E+010	.1827117E+03	.1000000E+03	.1224745E+02 .1224745E+01 .6942891E+000	.3430000E+03
.3779845E+000	0.	.1000000E+05	.1827117E+050	.3430000E+07 .3779845E+02
.4629100E+000	0.	0.	.6301312E+030	0.
0.	0.	0.	.3231000E+00	.3430000E+050
CASE NUMBER 110			GROUP NUMBER	
.2828427E+010	.2828427E+03	.1000000E+03	.1414214E+02 .1414214E+01 .1069045E+010	.3430000E+03
.3779845E+000	0.	.1000000E+05	.2828427E+050	.3430000E+07 .3779845E+02
.3245229E+000	0.	0.	.9701505E+030	0.
0.	0.	0.	.3418000E+00	.3430000E+050
CASE NUMBER 111			GROUP NUMBER	
.3952847E+01	.3952847E+03	.1000000E+03	.1581138E+02 .1581138E+01 .1494036E+010	.3430000E+03
.3779845E+000	0.	.1000000E+05	.3952847E+050	.3430000E+07 .3779845E+02
.5978143E+000	0.	0.	.1358827E+040	0.
0.	0.	0.	.3825000E+00	.3430000E+050
CASE NUMBER 112			GROUP NUMBER	
.5186152E+01	.5186152E+03	.1000000E+03	.1722081E+02 .1722081E+01 .1962961E+010	.3430000E+03
.3779845E+000	0.	.1000000E+05	.5186152E+050	.3430000E+07 .3779845E+02
.6546527E+000	0.	0.	.1782280E+040	0.
0.	0.	0.	.3889000E+00	.3430000E+050

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TRANSGENERATED
DATA INPUT
CASE NUMBER 113
.6547900E+01 .6547900E+03 .1000000E+03 .1870829E+03 .1870829E+01 .2474274E+010 .3430000E+03
.3779645E+000 .1000000E+05 .6547900E+050 .0 .0 .3430000E+07 .3779645E+02
.7071068E+000 .0 .0 .2245830E+040 .3430000E+050 .0
0 .0 .0 .4186000E+00

CASE NUMBER 114
.8830520E+01 .8830520E+03 .1000000E+03 .1897267E+03 .1897267E+01 .2587694E+010 .3430000E+03
.3779645E+000 .1000000E+05 .8830520E+050 .0 .0 .3430000E+07 .3779645E+02
.7171372E+000 .0 .0 .2342868E+040 .3430000E+050 .0
0 .0 .0 .4238000E+00

CASE NUMBER 115
.7117092E+01 .7117092E+03 .1000000E+03 .1923538E+03 .1923538E+01 .2690008E+010 .3430000E+03
.3779645E+000 .1000000E+05 .7117092E+050 .0 .0 .3430000E+07 .3779645E+02
.7270292E+000 .0 .0 .2441163E+040 .3430000E+050 .0
0 .0 .0 .4294000E+00

CASE NUMBER 116
.7407584E+01 .7407584E+03 .1000000E+03 .1949358E+03 .1949358E+01 .2799798E+010 .3430000E+03
.3779645E+000 .1000000E+05 .7407584E+050 .0 .0 .3430000E+07 .3779645E+02
.7367884E+000 .0 .0 .2540794E+040 .3430000E+050 .0
0 .0 .0 .4352000E+00

CASE NUMBER 117
.7701883E+01 .7701883E+03 .1000000E+03 .1974842E+03 .1974842E+01 .2911038E+010 .3430000E+03
.3779645E+000 .1000000E+05 .7701883E+050 .0 .0 .3430000E+07 .3779645E+02
.7464200E+000 .0 .0 .2641748E+040 .3430000E+050 .0
0 .0 .0 .4410000E+00

CASE NUMBER 118
.8000000E+01 .8000000E+03 .1000000E+03 .2000000E+03 .2000000E+01 .3023718E+010 .3430000E+03
.3779645E+000 .1000000E+05 .8000000E+050 .0 .0 .3430000E+07 .3779645E+02
.7559288E+000 .0 .0 .2744000E+040 .3430000E+050 .0
0 .0 .0 .4473000E+00

CASE NUMBER 119
.0 .0 .1000000E+030 .0 .0 .0 .7290000E+03
.3333333E+000 .1000000E+050 .0 .0 .0 .7290000E+07 .3333333E+02
0 .0 .0 .0 .7290000E+050 .0
0 .0 .0 .2784000E+00

CASE NUMBER 120
.235534E+00 .235534E+02 .1000000E+03 .7071068E+02 .7071068E+00 .779511E+000 .7290000E+03
.333333E+00 .1000000E+05 .235534E+050 .0 .0 .7290000E+07 .333333E+02
.2357023E+000 .0 .0 .2577404E+030 .7290000E+050 .0
0 .0 .0 .3000000E+00
    
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DATA INPUT
CASE NUMBER 121
.1000000E+01 .1000000E+03 .1000000E+03 .1000000E+03 .1000000E+01 .333333E+000 .7290000E+03
.3333333E+000 .1000000E+05 .1000000E+050 .0 .0 .7290000E+07 .3333333E+02
.3333333E+000 .0 .0 .7290000E+030 .7290000E+050 .0
0 .0 .0 .2188000E+00

CASE NUMBER 122
.1837117E+01 .1837117E+03 .1000000E+03 .1224745E+03 .1224745E+01 .8123724E+000 .7290000E+03
.3333333E+000 .1000000E+05 .1837117E+050 .0 .0 .7290000E+07 .3333333E+02
.4082483E+000 .0 .0 .133258E+040 .7290000E+050 .0
0 .0 .0 .3383000E+00

CASE NUMBER 123
.2828427E+01 .2828427E+03 .1000000E+03 .1414214E+03 .1414214E+01 .8428990E+000 .7290000E+03
.3333333E+000 .1000000E+05 .2828427E+050 .0 .0 .7290000E+07 .3333333E+02
.4714045E+000 .0 .0 .2061923E+040 .7290000E+050 .0
0 .0 .0 .3584000E+00

CASE NUMBER 124
.3952847E+01 .3952847E+03 .1000000E+03 .1581139E+03 .1581139E+01 .1217818E+010 .7290000E+03
.3333333E+000 .1000000E+05 .3952847E+050 .0 .0 .7290000E+07 .3333333E+02
.5270483E+000 .0 .0 .2891828E+040 .7290000E+050 .0
0 .0 .0 .3938000E+00

CASE NUMBER 125
.5198152E+01 .5198152E+03 .1000000E+03 .1732051E+03 .1732051E+01 .1732051E+010 .7290000E+03
.3333333E+000 .1000000E+05 .5198152E+050 .0 .0 .7290000E+07 .3333333E+02
.5773503E+000 .0 .0 .3787985E+040 .7290000E+050 .0
0 .0 .0 .4128000E+00

CASE NUMBER 126
.5458113E+01 .5458113E+03 .1000000E+03 .1760682E+03 .1760682E+01 .1819371E+010 .7290000E+03
.3333333E+000 .1000000E+05 .5458113E+050 .0 .0 .7290000E+07 .3333333E+02
.5868829E+000 .0 .0 .3978985E+040 .7290000E+050 .0
0 .0 .0 .4205000E+00

CASE NUMBER 127
.5724334E+01 .5724334E+03 .1000000E+03 .1788854E+03 .1788854E+01 .1809111E+010 .7290000E+03
.3333333E+000 .1000000E+05 .5724334E+050 .0 .0 .7290000E+07 .3333333E+02
.5962848E+000 .0 .0 .4173048E+040 .7290000E+050 .0
0 .0 .0 .4271000E+00

CASE NUMBER 128
.5994748E+01 .5994748E+03 .1000000E+03 .1816590E+03 .1816590E+01 .1898248E+010 .7290000E+03
.3333333E+000 .1000000E+05 .5994748E+050 .0 .0 .7290000E+07 .3333333E+02
.8053301E+000 .0 .0 .4370171E+040 .7290000E+050 .0
0 .0 .0 .4338000E+00
    
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DATA INPUT

CASE NUMBER	GROUP NUMBER
6289290E+01	1843909E+03
3333333E+000	6289290E+03
5146363E+000	1000000E+05
0	4570311E+040
0	4410000E+00
6547900E+01	1870829E+03
3333333E+000	1870829E+01
6236086E+000	2182833E+010
0	7290000E+07
0	3333333E+02
0	0
2628817E+02	1380130E+02
3162278E+000	1380130E+00
4364356E+010	8213050E+030
0	1000000E+04
0	1000000E+05
0	2628817E+020
0	2628817E+010
0	1000000E+060
0	2847000E+00
353534E+00	7071068E+02
3162278E+000	7071068E+00
2236086E+000	1118034E+000
0	1000000E+04
0	1000000E+05
0	353534E+040
0	353534E+030
0	1000000E+060
0	3052000E+00
1000000E+01	3162278E+000
3162278E+000	1000000E+03
3162278E+000	1000000E+04
0	1000000E+05
0	1000000E+06
0	3229000E+00
1837117E+01	1224745E+03
3162278E+000	1224745E+01
3872983E+000	5808475E+000
0	1000000E+08
0	1000000E+04
0	1000000E+08
0	3162278E+02
0	1000000E+060
0	3422000E+00
2828427E+01	1414214E+03
3162278E+000	1414214E+01
4472136E+000	8944272E+000
0	1000000E+04
0	1000000E+05
0	2828427E+050
0	2828427E+040
0	1000000E+060
0	3670000E+00
3852847E+01	1581139E+03
3162278E+000	1581139E+01
5000000E+000	1250000E+010
0	1000000E+04
0	1000000E+05
0	3852847E+050
0	3852847E+040
0	1000000E+060
0	3942000E+00

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DATA INPUT

CASE NUMBER	GROUP NUMBER
5186152E+01	1732051E+03
3162278E+000	1732051E+01
5477226E+000	1643168E+010
0	1000000E+04
0	1000000E+05
0	5186152E+050
0	5186152E+040
0	1000000E+060
0	4259000E+00
5458113E+01	1760622E+03
3162278E+000	1760622E+01
5547764E+000	1726007E+010
0	1000000E+04
0	1000000E+05
0	5458113E+050
0	5458113E+040
0	1000000E+060
0	4327000E+00
5724334E+01	1788654E+03
3162278E+000	1788654E+01
5636854E+000	1810183E+010
0	1000000E+04
0	1000000E+05
0	5724334E+050
0	5724334E+040
0	1000000E+060
0	4386000E+00
2886751E+000	1728000E+04
0	1000000E+030
0	1000000E+050
0	0
0	1728000E+060
0	2886751E+02
0	2803000E+00
353534E+00	7071068E+02
2886751E+000	7071068E+00
2041241E+000	1020821E+000
0	1728000E+04
0	1000000E+05
0	353534E+040
0	6109403E+030
0	1728000E+060
0	3126000E+00
1000000E+01	2886751E+000
2886751E+000	1000000E+03
2886751E+000	1000000E+04
0	1000000E+05
0	1000000E+06
0	1728000E+060
0	3345000E+00
1837117E+01	1224745E+03
2886751E+000	1224745E+01
353534E+000	5303301E+000
0	1728000E+04
0	1000000E+05
0	1837117E+050
0	3174539E+040
0	1728000E+060
0	3375000E+00
2828427E+01	1414214E+03
2886751E+000	1414214E+01
4082483E+000	8164866E+000
0	1728000E+04
0	1000000E+05
0	2828427E+050
0	4887522E+040
0	1728000E+060
0	3843000E+00

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DATA INPUT
CASE NUMBER 145
3952847E+01 3952847E+03 1000000E+03 1581139E+03 1581139E+01 1141088E+010 1728000E+04
2886751E+000 1000000E+05 3952847E+050 0 1728000E+08 2886751E+02
4564355E+000 0 6829320E+040 1728000E+060 0
0 0 4153000E+00
CASE NUMBER 146
4192374E+01 4192374E+03 1000000E+03 1612452E+03 1612452E+01 1210234E+010 1728000E+04
2886751E+000 1000000E+05 4192374E+050 0 1728000E+08 2886751E+02
4854747E+000 0 724422E+040 1728000E+060 0
0 0 4218000E+00
CASE NUMBER 147
4436555E+01 4436555E+03 1000000E+03 1643188E+03 1643188E+01 1280722E+010 1728000E+04
2886751E+000 1000000E+05 4436555E+050 0 1728000E+08 2886751E+02
4743418E+000 0 7666363E+040 1728000E+060 0
0 0 4282000E+00
CASE NUMBER 148
2826129E+000 1000000E+030 0 0 0 3048625E+04
2826129E+000 1000000E+050 0 0 3048625E+08 2826129E+02
0 0 3020000E+00
CASE NUMBER 149
3535534E+00 3535534E+02 1000000E+03 7071068E+02 7071068E+00 5284767E+010 3048625E+04
2826129E+000 1000000E+05 3535534E+040 0 3048625E+08 2826129E+02
1856853E+000 0 3048625E+060 0
0 0 3250000E+00
CASE NUMBER 150
1000000E+01 1000000E+03 1000000E+03 1000000E+03 1000000E+01 2626129E+000 3048625E+04
2826129E+000 1000000E+05 1000000E+050 0 3048625E+08 2826129E+02
2826129E+000 0 3048625E+060 0
0 0 3488000E+00
CASE NUMBER 151
1837117E+01 1837117E+03 1000000E+03 1224745E+03 1224745E+01 4824506E+000 3048625E+04
2826129E+000 1000000E+05 1837117E+050 0 3048625E+08 2826129E+02
1216338E+000 0 3048625E+060 0
0 0 3760000E+00
CASE NUMBER 152
2828427E+01 2828427E+03 1000000E+03 1414214E+03 1414214E+01 7427814E+000 3048625E+04
2826129E+000 1000000E+05 2828427E+050 0 3048625E+08 2826129E+02
3713907E+000 0 3048625E+060 0
0 0 4065000E+00

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TRANSGENERATED
DATA INPUT
CASE NUMBER 153
3042188E+01 3042188E+03 1000000E+03 1449138E+03 1449138E+01 7991806E+000 3048625E+04
2826129E+000 1000000E+05 3042188E+050 0 3048625E+08 2826129E+02
3805822E+000 0 3048625E+060 0
0 0 4128000E+00
CASE NUMBER 154
0 2000000E+030 0 0 0 3430000E+03
3779445E+000 4000000E+050 0 0 1372000E+08 7559289E+02
0 0 6860000E+050 0
0 0 2520000E+00
CASE NUMBER 155
3535534E+00 7071068E+02 2000000E+03 1414214E+03 7071068E+00 1336306E+000 3430000E+03
3779445E+000 4000000E+05 1414214E+050 0 1372000E+08 7559289E+02
2672612E+000 0 6860000E+050 0
0 0 2647000E+00
CASE NUMBER 156
1000000E+01 2000000E+03 2000000E+03 2000000E+03 1000000E+01 3779445E+000 3430000E+03
3779445E+000 4000000E+05 4000000E+050 0 1372000E+08 7559289E+02
3779445E+000 0 3430000E+060 6860000E+050 0
0 0 2782000E+00
CASE NUMBER 157
1837117E+01 1837117E+03 2000000E+03 2449490E+03 1224745E+01 6943651E+000 3430000E+03
3779445E+000 4000000E+05 2449490E+050 0 1372000E+08 7559289E+02
4829100E+000 0 6860000E+050 0
0 0 2939000E+00
CASE NUMBER 158
2828427E+01 2828427E+03 2000000E+03 2828427E+03 1414214E+01 1089045E+010 3430000E+03
3779445E+000 4000000E+05 1131371E+060 0 1372000E+08 7559289E+02
5345225E+000 0 6860000E+050 0
0 0 3118000E+00
CASE NUMBER 159
3952847E+01 3952847E+03 2000000E+03 3142278E+03 1581139E+01 1494036E+010 3430000E+03
3779445E+000 4000000E+05 1581139E+040 0 1372000E+08 7559289E+02
5978143E+000 0 6860000E+060 0
0 0 3340000E+00
CASE NUMBER 160
5196152E+01 1039230E+04 2000000E+03 3464102E+03 1722051E+01 1982901E+010 3430000E+03
3779445E+000 4000000E+05 2078461E+060 0 1372000E+08 7559289E+02
6546537E+000 0 6860000E+050 0
0 0 3577000E+00

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TRANSGENERATED
DATA INPUT

CASE NUMBER	GROUP NUMBER								
161	1								
4587900E-01		1308580E-04	2000000E-03	3741657E-03	1870829E-01	2474874E+010		3430000E-03	
3778645E+000			4000000E+05	2618180E-040			1372000E+08	7559289E-02	
7071068E+000				2248820E-040		6860000E-050			0.
0.				3858000E-00					0.
162	1								
4830520E-01		1368104E-04	2000000E-03	3784733E-03	1897367E-01	2581684E+010		3430000E-03	
3778645E+000			4000000E+05	2732208E-050			1372000E+08	7559289E-02	
7171372E+000				2342868E-040		6860000E-050			0.
0.				3908000E-00					0.
163	1								
7117082E-01		1423418E-04	2000000E-03	3847077E-03	1923538E-01	2890008E+010		3430000E-03	
3778645E+000			4000000E+05	2848270E-050			1372000E+08	7559289E-02	
7270292E+000				2441183E-040		6860000E-050			0.
0.				3862000E-00					0.
164	1								
7407564E-01		1481513E-04	2000000E-03	3898718E-03	1949359E-01	2799796E+010		3430000E-03	
3778645E+000			4000000E+05	2963025E-050			1372000E+08	7559289E-02	
7267884E+000				2540794E-040		6860000E-050			0.
0.				4019000E-00					0.
165	1								
3333333E+000			2000000E+030					7290000E-03	
0.			4000000E+050				2916000E+08	6666667E-02	
0.						1458000E-060			0.
0.				2585000E-00					0.
166	1								
353534E+00		7071068E+02	2000000E-03	1414214E+03	7071068E+06	1178511E+000		7290000E-03	
3333333E+000			4000000E+05	1414214E+050			2916000E+08	6666667E-02	
2357023E+000				2577404E+030		1458000E-060			0.
0.				2734000E-00					0.
167	1								
1000000E+01		2000000E-03	2000000E-02	2000000E-03	1000000E-01	3333333E-000		7290000E-03	
3333333E+000			4000000E+05	4000000E+050			2916000E+08	6666667E-02	
3333333E+000				7290000E-030		1458000E-060			0.
0.				2897000E-00					0.
168	1								
1837117E-01		1674235E-03	2000000E-03	2449490E-03	1224745E-01	6123724E+000		7290000E-03	
3333333E+000			4000000E+05	7348469E-050			2916000E+08	6666667E-02	
4082483E+000				1339259E-040		1458000E-060			0.
0.				3082000E-00					0.

TRANSGENERATED
DATA INPUT

CASE NUMBER	GROUP NUMBER								
169	1								
2828427E-01		5658854E-03	2000000E-03	2828427E-03	1414214E-01	9428090E+000		7290000E-03	
3333333E+000			4000000E+05	1131371E-060			2916000E+08	6666667E-02	
4714045E+000				2061923E-040		1458000E-060			0.
0.				3298000E-00					0.
170	1								
3952847E-01		7905694E-03	2000000E-03	3162278E-03	1581139E-01	1317616E+010		7290000E-03	
3333333E+000			4000000E+05	1581139E+050			2916000E+08	6666667E-02	
5270463E+000				2891628E-040		1458000E-060			0.
0.				3539000E-00					0.
171	1								
5198152E-01		1039230E-04	2000000E-03	3484102E-03	1732051E-01	1732051E+010		7290000E-03	
3333333E+000			4000000E+05	2078461E-060			2916000E+08	6666667E-02	
5773503E-000				3787995E-040		1458000E-060			0.
0.				3822000E-00					0.
172	1								
5458112E-01		1051823E-04	2000000E-03	3521383E-03	1760682E-01	1819371E+010		7290000E-03	
3333333E+000			4000000E+05	2182245E-060			2916000E+08	6666667E-02	
5868939E+000				3878985E-040		1458000E-060			0.
0.				3884000E-00					0.
173	1								
572434E-01		1144867E-04	2000000E-03	3577709E-03	1788854E-01	1908111E+010		7290000E-03	
3333333E+000			4000000E+05	2289734E-060			2916000E+08	6666667E-02	
5962948E+000				4173040E-040		1458000E-060			0.
0.				3948000E-00					0.
174	1								
3162278E+000			2000000E+030					1000000E-04	
0.			4000000E+050				4000000E+08	6324555E-02	
0.						2000000E-060			0.
0.				2619000E-00					0.
175	1								
393534E+00		7071068E+02	2000000E-03	1414214E+03	7071068E+06	118034E+000		1000000E-04	
3162278E+000			4000000E+05	1414214E+050			4000000E+08	6324555E-02	
2236088E+000				353534E-030		2000000E-060			0.
0.				2783000E-00					0.
176	1								
1000000E+01		2000000E-03	2000000E-02	2000000E-03	1000000E-01	3162278E-000		1000000E-04	
3162278E+000			4000000E+05	4000000E+050			4000000E+08	6324555E-02	
3162278E+000				1000000E-040		2000000E-060			0.
0.				2556000E-00					0.

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TRANSGENERATED
DATA INPUT
CASE NUMBER 177
.1837117E+01 .3674235E+03 .2000000E+03 .2449490E+03 .1224745E+01 .5809475E+000 .1000000E+04
.3162278E+000 .4000000E+05 .7248489E+050 .0 .4000000E+08 .6324555E+02
.3872983E+000 .0 .0 .1837117E+040 .2000000E+060 .0 .0
0 0 0 .3160000E+00
CASE NUMBER 178
.2828427E+01 .5656854E+03 .2000000E+03 .2828427E+03 .1414214E+01 .8944272E+000 .1000000E+04
.3162278E+000 .4000000E+05 .131271E+080 .0 .4000000E+08 .6324555E+02
.4472136E+000 .0 .0 .2828427E+040 .20.00000E+060 .0 .0
0 0 0 .3382000E+00
CASE NUMBER 179
.3852847E+01 .7905894E+03 .2000000E+03 .3162278E+03 .1581138E+01 .1250000E+010 .1000000E+04
.3162278E+000 .4000000E+05 .1581138E+060 .0 .4000000E+08 .6324555E+02
.5000000E+000 .0 .0 .3852847E+040 .2000000E+060 .0 .0
0 0 0 .1639000E+00
CASE NUMBER 180
.4192374E+01 .8384748E+03 .2000000E+03 .3224903E+03 .1612452E+01 .1325745E+010 .1000000E+04
.3162278E+000 .4000000E+05 .1678950E+060 .0 .4000000E+08 .6324555E+02
.5099020E+000 .0 .0 .4192374E+040 .2000000E+060 .0 .0
0 0 0 .3696000E+00
CASE NUMBER 181
.4438555E+01 .8773105E+03 .2000000E+03 .3286335E+03 .1642162E+01 .1402987E+010 .1000000E+04
.3162278E+000 .4000000E+05 .1774621E+060 .0 .4000000E+08 .6324555E+02
.5194152E+000 .0 .0 .4438555E+040 .2000000E+060 .0 .0
0 0 0 .3754000E+00
CASE NUMBER 182
.4885288E+01 .9370592E+03 .2000000E+03 .3346640E+03 .1673320E+01 .1481621E+010 .1000000E+04
.3162278E+000 .4000000E+05 .1874118E+060 .0 .4000000E+08 .6324555E+02
.5291503E+000 .0 .0 .4885288E+040 .2000000E+060 .0 .0
0 0 0 .3815000E+00
CASE NUMBER 183
.4938522E+01 .9877044E+03 .2000000E+03 .3405877E+03 .1702938E+01 .1561688E+010 .1000000E+04
.3162278E+000 .4000000E+05 .1975409E+060 .0 .4000000E+08 .6324555E+02
.5385165E+000 .0 .0 .4938522E+040 .2000000E+060 .0 .0
0 0 0 .3878000E+00
CASE NUMBER 184
0 0 .2000000E+030 .0 .0 .0 .0 .1728000E+04
.2886751E+000 .4000000E+050 .0 .0 .0 .6912000E+08 .5773503E+02
0 0 .0 .0 .0 .0 .0
0 0 .0 .0 .0 .0 .3456000E+060 .0
0 0 .0 .0 .2681000E+00

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TRANSGENERATED
DATA INPUT
CASE NUMBER 185
.3535534E+00 .7071068E+02 .2000000E+03 .1414214E+03 .7071068E+00 .1020421E+000 .1728000E+04
.2886751E+000 .4000000E+05 .1414214E+050 .0 .6912000E+08 .5773503E+02
.2041241E+000 .0 .0 .6108403E+030 .3456000E+060 .0 .0
0 0 0 .2887000E+00
CASE NUMBER 186
.1000000E+01 .2000000E+03 .2000000E+03 .2000000E+03 .1000000E+01 .2886751E+000 .1728000E+04
.2886751E+000 .4000000E+05 .4000000E+030 .0 .6912000E+08 .5773503E+02
.2886751E+000 .0 .0 .1728000E+040 .3456000E+060 .0 .0
0 0 0 .3083000E+00
CASE NUMBER 187
.1837117E+01 .3674235E+03 .2000000E+03 .2449490E+03 .1224745E+01 .5302307E+000 .1728000E+04
.2886751E+000 .4000000E+05 .7248489E+050 .0 .6912000E+08 .5773503E+02
.3535534E+000 .0 .0 .1837117E+040 .3456000E+060 .0 .0
0 0 0 .3304000E+00
CASE NUMBER 188
.2828427E+01 .5656854E+03 .2000000E+03 .2828427E+03 .1414214E+01 .8184966E+000 .1728000E+04
.2886751E+000 .4000000E+05 .1131271E+080 .0 .6912000E+08 .5773503E+02
.4092483E+000 .0 .0 .2828427E+040 .3456000E+060 .0 .0
0 0 0 .3550000E+00
CASE NUMBER 189
.3043188E+01 .6086378E+03 .2000000E+03 .2898275E+03 .1448138E+01 .8784930E+000 .1728000E+04
.2886751E+000 .4000000E+05 .1217278E+060 .0 .6912000E+08 .5773503E+02
.4183300E+000 .0 .0 .3043188E+040 .3456000E+060 .0 .0
0 0 0 .3805000E+00
CASE NUMBER 190
.3263127E+01 .6526255E+03 .2000000E+03 .2866478E+03 .1483240E+01 .8419837E+000 .1728000E+04
.2886751E+000 .4000000E+05 .1305251E+080 .0 .6912000E+08 .5773503E+02
.4281744E+000 .0 .0 .3263127E+040 .3456000E+060 .0 .0
0 0 0 .3861000E+00
CASE NUMBER 191
.3489123E+01 .6978245E+03 .2000000E+03 .3033150E+03 .1516575E+01 .1006934E+010 .1728000E+04
.2886751E+000 .4000000E+05 .1295249E+060 .0 .6912000E+08 .5773503E+02
.4377975E+000 .0 .0 .3489123E+040 .3456000E+060 .0 .0
0 0 0 .3715000E+00
CASE NUMBER 192
.3718064E+01 .7436126E+03 .2000000E+03 .3098387E+03 .1548193E+01 .1072312E+010 .1728000E+04
.2886751E+000 .4000000E+05 .1487226E+060 .0 .6912000E+08 .5773503E+02
.4477138E+000 .0 .0 .3718064E+040 .3456000E+060 .0 .0
0 0 0 .3779000E+00

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DATA INPUT
CASE NUMBER 192
1707467E-02 3414934E+00 2000000E-03 2390456E+02 1195220E+00 4484028E-030 3048625E-04
2626129E+000 4000000E+05 4829688E+020 0 1219450E+09 5252257E-02
3138823E-010 0 5205428E+010 6097250E+060 0
0 0 2821000E+00
CASE NUMBER 194
3335534E-00 7071068E-02 2000000E+03 1414214E+03 7071068E+00 8284787E-010 3048625E-04
2626129E+000 4000000E+05 1414214E+050 0 1219450E+09 5252257E-02
1856953E+000 0 1077852E+040 6097250E+080 0
0 0 3033000E+00
CASE NUMBER 195
1000000E-01 2000000E+03 2000000E+03 2000000E+03 1000000E+01 2626129E+000 3048625E-04
2626129E+000 4000000E+05 4000000E+050 0 1219450E+09 5252257E-02
2626129E+000 0 3048625E+040 6097250E+060 0
0 0 2236000E+00
CASE NUMBER 196
1837117E-01 3674235E-03 2000000E+02 2448490E+03 1224745E+01 4824308E+000 3048625E-04
2626129E+000 4000000E+05 7388489E+050 0 1219450E+09 5252257E-02
3218338E+000 0 5800832E+040 6097250E+060 0
0 0 3477000E+00
CASE NUMBER 197
2023858E-01 4047715E-03 2000000E+03 2529822E+03 1264911E+01 5314911E+000 3048625E-04
2626129E+000 4000000E+05 8095431E+050 0 1219450E+09 5252257E-02
3321818E+000 0 6189983E+040 6097250E+060 0
0 0 3529000E+00
CASE NUMBER 198
2218529E-01 4433058E-03 2000000E+03 2607681E+03 1303840E+01 5820890E+000 3048625E-04
2626129E+000 4000000E+05 888115E+050 0 1219450E+09 5252257E-02
3424053E+000 0 6757365E+040 6097250E+060 0
0 0 3584000E+00
CASE NUMBER 199
2414953E-01 4829807E-03 2000000E+03 2683282E+03 1341641E+01 6341978E+000 3048625E-04
2626129E+000 4000000E+05 9658814E+050 0 1219450E+09 5252257E-02
3523231E+000 0 7362287E+040 6097250E+060 0
0 0 3641000E+00
CASE NUMBER 200
0 0 5000000E+020 0 0 0 3430000E-03
1779645E+000 2500000E+040 5832000E+04 8803361E+01 8575000E+06 1889822E-02
0 0 1800000E+020 0 1715000E+050 0
0 0 2816000E+06 3037000E+00

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DATA INPUT
CASE NUMBER 201
3535534E-00 1747787E-02 5000000E+02 3535534E-02 7071068E+00 3383068E+00 1272792E-02 3430000E+03
3779645E+00 6383981E+01 2500000E+04 8838835E-03 5832000E+04 8803361E+01 8575000E+06 1889822E-02
2626129E+00 4123847E+04 1800000E+02 1212688E-03 3181881E-03 1715000E+05 1580990E+05 2061923E-04
- 6363981E+03 3181981E+05 2916000E+06 3284000E+00
CASE NUMBER 202
1000000E-01 5000000E+02 5000000E+02 5000000E+02 1000000E+01 3779645E+00 1800000E-02 3430000E-02
3779645E+00 1800000E-02 2500000E+04 2500000E+04 5832000E+04 8803361E+01 8575000E+06 1889822E-02
3779645E+00 5832000E+04 1800000E-02 3430000E-03 9000000E-03 1715000E+05 4500000E+05 5832000E-04
- 9000000E-03 4500000E+05 2916000E+06 3478000E+00
CASE NUMBER 203
938408E-01 9882039E-02 5000000E+02 8222117E-02 1248423E-01 7118934E+00 2243562E-02 3430000E-03
3779645E+00 3485534E-02 2500000E+04 4841020E+04 5832000E+04 8803361E+01 8575000E+06 1889822E-02
4711039E+00 7289142E+04 1800000E+02 6841878E-03 1742767E-04 1715000E+05 8713835E+05 1129313E+05
- 1121781E+04 5808905E+05 2916000E+06 3715000E+00
CASE NUMBER 204
2828427E-01 1414214E-03 5000000E+02 7071068E+02 1414214E+01 1088045E+01 2545584E-02 3430000E-02
3779645E+00 5091189E-02 2500000E+04 7071068E+04 5832000E+04 8803361E+01 8575000E+06 1889822E-02
5345225E+00 8247893E+04 1800000E+02 3701505E-03 2545584E-04 1715000E+05 1272792E+06 1649339E-05
- 1272792E+06 5383981E+05 2916000E+06 3930000E+00
CASE NUMBER 205
3081115E-01 1980558E-03 5000000E+02 7824485E-02 1584898E-01 1504720E+01 2852818E-02 3430000E-03
3779645E+00 7168008E-02 2500000E+04 8952788E+04 5832000E+04 8803361E+01 8575000E+06 1889822E-02
5990355E+00 8243131E+04 1800000E+02 365522E+04 3583004E-04 1715000E+05 1791502E+06 2321786E-05
- 1426409E-04 7132045E+05 2916000E+06 4240000E+00
CASE NUMBER 206
5196152E-01 2588076E-03 5000000E+02 8660254E+02 1732051E-01 1983981E+01 3117691E-02 3430000E-03
3779645E+00 9353974E-02 2500000E+04 1299038E+05 5832000E+04 8803361E+01 8575000E+06 1889822E-02
8846527E+00 1810132E+05 1800000E-02 1782280E-04 4678537E-04 1715000E+05 2338289E+06 3030396E-05
- 558848E-04 7798229E-05 2916000E+06 4592000E+00
CASE NUMBER 207
8547900E-01 3273959E-03 5000000E+02 8354143E+02 1870828E-01 2474874E+01 3387492E-02 3430000E-03
3779645E+00 1178822E-03 2500000E+04 1638975E+05 5832000E+04 8803361E+01 8575000E+06 1889822E-02
7071068E+00 1091067E+05 1800000E-02 2245930E+04 5893110E-04 1715000E+05 2946555E+06 3818736E-05
- 1682748E-04 8418729E+05 2916000E+06 4919000E+00
CASE NUMBER 208
8000000E-01 4000000E+03 5000000E+02 1000000E+03 2000000E+01 1023716E+01 3600000E-02 3430000E-03
3779645E+00 1480000E-03 2500000E+04 2000000E+05 5832000E+04 8803361E+01 8575000E+06 1889822E-02
7889289E+00 1188400E+05 1800000E-02 2744000E+04 7200000E+04 1715000E+05 3800000E+06 4665600E-05
- 1800000E+04 9000000E+05 2916000E+06 5292000E+00

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DATA INPUT

CASE NUMBER	GROUP NUMBER
209	2
3301867E-01	3150834E-03
3779645E-00	1494336E-02
7853197E-00	1180190E-05
1822361E-04	3111806E-05
210	2
8607439E-01	4303715E-03
3779645E-00	1548339E-02
7745867E-00	1185204E-05
864451E-04	3222256E-05
211	2
8816670E-01	4458335E-03
3779645E-00	1605001E-02
7827638E-00	1209349E-05
1866280E-04	9231398E-05
212	2
0	0
3333333E-000	2500000E-040
0	0
0	0
213	2
3525534E-00	1767767E-02
2357023E-00	4123847E-04
6363967E-03	2181991E-05
214	2
1000000E-01	5000000E-02
3333333E-00	1800000E-02
3333333E-00	5832000E-04
8000000E-03	9500000E-05
215	2
1837117E-01	9185587E-02
3333333E-00	3304811E-02
4082487E-00	7142712E-04
1102270E-04	5511352E-05
216	2
2828427E-01	1414214E-03
3333333E-00	509169E-02
4714045E-00	824783E-04
1272792E-04	6363967E-05

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DATA INPUT

CASE NUMBER	GROUP NUMBER
217	2
3952847E-01	1976424E-02
3323232E-00	715125E-02
5270483E-00	8221202E-04
142323E-04	715125E-05
218	2
5196152E-01	2580876E-03
3333333E-00	9353074E-02
5772502E-00	1010132E-05
1558848E-04	7794229E-05
219	2
6547900E-01	3272950E-03
3333333E-00	1178822E-03
8226098E-00	1091047E-05
188374E-04	8418729E-05
220	2
8830520E-01	3415280E-03
3333333E-00	1229494E-03
632455E-00	1106544E-05
1707630E-04	8538150E-05
221	2
7117092E-01	3558546E-03
3333333E-00	1281077E-03
6411795E-00	1121808E-05
1731185E-04	8655923E-05
222	2
7407564E-01	3703782E-03
3333333E-00	1333361E-03
8497863E-00	1136868E-05
1754423E-04	8772115E-05
223	2
0	0
3162278E-000	2500000E-040
0	0
0	0
224	2
353534E-00	1767767E-02
3162278E-00	6363967E-05
2236068E-00	4123847E-04
8282987E-03	3181991E-05

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DATA INPUT
CASE NUMBER 223                                GROUP NUMBER 2
- 1000000E+01 - 5000000E+02 - 5000000E+02 - 1000000E+01 - 362278E+00 - 1800000E+02 - 1000000E+04
- 3162278E+00 - 1800000E+02 - 2500000E+04 - 2500000E+04 - 5822000E+04 - 582100E+01 - 2500000E+07 - 1581139E+02
- 3162278E+00 - 5822000E+04 - 1800000E+02 - 1000000E+04 - 8000000E+03 - 5000000E+05 - 4500000E+05 - 5822000E+04
- 9000000E+03 - 4500000E+05 - 2916000E+06 - 3743000E+00
CASE NUMBER 226                                GROUP NUMBER 2
- 1837117E+01 - 5185587E+02 - 5000000E+02 - 6122724E+02 - 1224745E+01 - 5809475E+00 - 2204541E+02 - 1000000E+04
- 3162278E+00 - 3308811E+02 - 2500000E+04 - 4592783E+04 - 5822000E+04 - 582100E+01 - 2500000E+07 - 1581139E+02
- 3872982E+00 - 7142712E+04 - 1800000E+02 - 1837117E+04 - 1852408E+04 - 5000000E+05 - 8267028E+05 - 1071407E+05
- 1102270E+04 - 5511352E+05 - 2916000E+06 - 4040000E+00
CASE NUMBER 227                                GROUP NUMBER 2
- 2830041E+01 - 1465021E+03 - 5000000E+02 - 7184752E+02 - 1438950E+01 - 9285604E+00 - 2575711E+02 - 1000000E+04
- 3162278E+00 - 5274074E+02 - 2500000E+04 - 7325103E+04 - 5822000E+04 - 582100E+01 - 2500000E+07 - 1581139E+02
- 4525062E+00 - 8348303E+04 - 1800000E+02 - 2930041E+04 - 2837037E+04 - 5000000E+05 - 1318519E+06 - 1708800E+05
- 1287855E+04 - 6438277E+05 - 2916000E+06 - 4350000E+00
CASE NUMBER 228                                GROUP NUMBER 2
- 4066322E+01 - 2033141E+03 - 5000000E+02 - 7980631E+02 - 1588126E+01 - 1285884E+01 - 2873027E+02 - 1000000E+04
- 3162278E+00 - 7319379E+02 - 2500000E+04 - 1016580E+05 - 5822000E+04 - 582100E+01 - 2500000E+07 - 1581139E+02
- 5047294E+00 - 9308608E+04 - 1800000E+02 - 4066322E+04 - 2658689E+04 - 5000000E+05 - 1828845E+06 - 2371478E+05
- 1438514E+04 - 7182568E+05 - 2916000E+06 - 4850000E+00
CASE NUMBER 229                                GROUP NUMBER 2
- 5198152E+01 - 2588078E+03 - 5000000E+02 - 8680254E+02 - 1732051E+01 - 1843168E+01 - 3117681E+02 - 1000000E+04
- 3162278E+00 - 8253074E+02 - 2500000E+04 - 1289038E+05 - 5822000E+04 - 582100E+01 - 2500000E+07 - 1581139E+02
- 5477228E+00 - 1010132E+05 - 1800000E+02 - 5198152E+04 - 4678517E+04 - 5000000E+05 - 2338268E+06 - 3030398E+05
- 1588848E+04 - 7794228E+05 - 2916000E+06 - 5028000E+00
CASE NUMBER 230                                GROUP NUMBER 2
- 6547800E+01 - 3273950E+03 - 5000000E+02 - 8354143E+02 - 1870828E+01 - 2070828E+01 - 3367492E+02 - 1000000E+04
- 3162278E+00 - 1178822E+02 - 2500000E+04 - 1638975E+03 - 5822000E+04 - 582100E+01 - 2500000E+07 - 1581139E+02
- 5816080E+00 - 1091607E+05 - 1800000E+02 - 6547800E+04 - 5893110E+04 - 5000000E+05 - 2946558E+06 - 3818738E+05
- 1683748E+04 - 8618728E+05 - 2916000E+06 - 5495000E+00
CASE NUMBER 231                                GROUP NUMBER 2
- 8205200E+01 - 3415260E+03 - 5000000E+02 - 9488823E+02 - 1887387E+01 - 2180000E+01 - 3415260E+02 - 1000000E+04
- 3162278E+00 - 1228494E+02 - 2500000E+04 - 1707830E+05 - 5822000E+04 - 582100E+01 - 2500000E+07 - 1581139E+02
- 6800000E+00 - 1108544E+05 - 1800000E+02 - 8205200E+04 - 6147488E+04 - 5000000E+05 - 3073734E+06 - 3983558E+05
- 1707830E+04 - 8538150E+05 - 2916000E+06 - 5488000E+00
CASE NUMBER 232                                GROUP NUMBER 2
- 0 - 0 - 5000000E+02 - 0 - 0 - 0 - 1728000E+04
- 2886751E+00 - 2500000E+04 - 5822000E+04 - 5186152E+01 - 4320000E+07 - 1443378E+02
- 0 - 0 - 1800000E+02 - 0 - 0 - 8640000E+05 - 0
- 0 - 0 - 2916000E+06 - 3364000E+00

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DATA INPUT
CASE NUMBER 233                                GROUP NUMBER 2
- 3535534E+00 - 1787787E+02 - 5000000E+02 - 3535534E+02 - 7071088E+00 - 1020621E+00 - 1272792E+02 - 1728000E+04
- 2886751E+00 - 6333881E+01 - 2500000E+04 - 8838335E+03 - 5822000E+04 - 5186152E+01 - 4320000E+07 - 1443378E+02
- 2041241E+00 - 6123847E+04 - 1800000E+02 - 6109403E+03 - 3181981E+03 - 8640000E+05 - 1580990E+05 - 2081923E+04
- 8282961E+03 - 3181981E+05 - 2916000E+06 - 3647000E+00
CASE NUMBER 234                                GROUP NUMBER 2
- 1000000E+01 - 5000000E+02 - 5000000E+02 - 1000000E+01 - 2886751E+00 - 1800000E+02 - 1728000E+04
- 2886751E+00 - 1800000E+02 - 2500000E+04 - 2500000E+04 - 5822000E+04 - 5186152E+01 - 4320000E+07 - 1443378E+02
- 2886751E+00 - 5822000E+04 - 1800000E+02 - 1728000E+04 - 8000000E+03 - 8640000E+05 - 4500000E+05 - 5822000E+04
- 9000000E+03 - 4500000E+05 - 2916000E+06 - 3835000E+00
CASE NUMBER 235                                GROUP NUMBER 2
- 1781108E+01 - 8805524E+02 - 5000000E+02 - 8038074E+02 - 1207615E+01 - 5083872E+00 - 2173706E+02 - 1728000E+04
- 2886751E+00 - 3169988E+02 - 2500000E+04 - 4402762E+04 - 5822000E+04 - 5186152E+01 - 4320000E+07 - 1443378E+02
- 3486082E+00 - 7042809E+04 - 1800000E+02 - 2043188E+04 - 1584994E+04 - 8640000E+05 - 7924871E+05 - 1027078E+05
- 1088853E+04 - 5434288E+05 - 2916000E+06 - 4180000E+00
CASE NUMBER 236                                GROUP NUMBER 2
- 2715548E+01 - 1357775E+03 - 5000000E+02 - 6975722E+02 - 1395148E+01 - 8838118E+00 - 2811260E+02 - 1728000E+04
- 2886751E+00 - 4887888E+02 - 2500000E+04 - 8788874E+04 - 5822000E+04 - 5186152E+01 - 4320000E+07 - 1443378E+02
- 4027438E+00 - 8136484E+04 - 1800000E+02 - 4852488E+04 - 2443895E+04 - 8640000E+05 - 1221987E+06 - 1583708E+05
- 1255630E+04 - 6278151E+05 - 2916000E+06 - 4480000E+00
CASE NUMBER 237                                GROUP NUMBER 2
- 3952847E+01 - 1978424E+03 - 5000000E+02 - 7905894E+02 - 1581139E+01 - 1141089E+01 - 2846050E+02 - 1728000E+04
- 2886751E+00 - 7115125E+02 - 2500000E+04 - 8882118E+04 - 5822000E+04 - 5186152E+01 - 4320000E+07 - 1443378E+02
- 4584558E+00 - 9212022E+04 - 1800000E+02 - 4830520E+04 - 3557562E+04 - 8640000E+05 - 1778781E+06 - 2305300E+05
- 1423025E+04 - 7115125E+05 - 2916000E+06 - 4892000E+00
CASE NUMBER 238                                GROUP NUMBER 2
- 4192374E+01 - 2096187E+03 - 5000000E+02 - 8062288E+02 - 1612452E+01 - 1210224E+01 - 2802613E+02 - 1728000E+04
- 2886751E+00 - 7548272E+02 - 2500000E+04 - 1048094E+05 - 5822000E+04 - 5186152E+01 - 4320000E+07 - 1443378E+02
- 4654747E+00 - 9403817E+04 - 1800000E+02 - 7244422E+04 - 3773137E+04 - 8640000E+05 - 1886568E+06 - 2444993E+05
- 1491208E+04 - 7256032E+05 - 2916000E+06 - 4887000E+00
CASE NUMBER 239                                GROUP NUMBER 2
- 4428553E+01 - 2218278E+03 - 5000000E+02 - 8215838E+02 - 1643168E+01 - 1280722E+01 - 2957702E+02 - 1728000E+04
- 2886751E+00 - 7885795E+02 - 2500000E+04 - 1109138E+05 - 5822000E+04 - 5186152E+01 - 4320000E+07 - 1443378E+02
- 8743818E+00 - 9582954E+04 - 1800000E+02 - 7866383E+04 - 3882897E+04 - 8640000E+05 - 1898449E+06 - 2587398E+05
- 1478991E+04 - 7384255E+05 - 2916000E+06 - 5088000E+00
CASE NUMBER 240                                GROUP NUMBER 2
- 4885288E+01 - 2342848E+03 - 5000000E+02 - 8386800E+02 - 1473320E+01 - 1352528E+01 - 3011976E+02 - 1728000E+04
- 2886751E+00 - 8433333E+02 - 2500000E+04 - 1171324E+05 - 5822000E+04 - 5186152E+01 - 4320000E+07 - 1443378E+02
- 4820458E+00 - 8758802E+04 - 1800000E+02 - 8098182E+04 - 4216767E+04 - 8640000E+05 - 2108883E+06 - 2732468E+05
- 1505988E+04 - 7328940E+05 - 2916000E+06 - 5158000E+00

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TRANSGENERATED DATA INPUT

Case number 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256. Each case includes a group number and a list of numerical values in scientific notation.

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TRANSGENERATED DATA INPUT

Case number 249, 250, 251, 252, 253, 254, 255, 256. Each case includes a group number and a list of numerical values in scientific notation.

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TRANSGENERATED
DATA INPUT
CASE NUMBER 257
.2828427E-010 0. 0. 1414214E+01 1058045E+01 2545584E+02 3430000E+03
.3779645E+00 5091169E+020 0. 5832000E+04 6803361E+010 0.
.5345225E-00 .8247693E+04 1800000E+02 .5701505E+030 0. 0. 1649539E+05
0 0 0. 3734000E+00 0 0 0.

CASE NUMBER 258
.3952847E-010 0. 0. 1581138E+01 1494036E+01 2846050E+02 3430000E+03
.3779645E+00 7115125E+020 0. 5832000E+04 6803361E+010 0.
.5976143E-00 9221202E+04 1800000E+02 1355827E+040 0. 0. 2305300E+05
0 0 0. 2853000E+00 0 0 0.

CASE NUMBER 259
.5196152E-010 0. 0. 1732051E+01 1883981E+01 3117691E+02 3430000E+03
.3779645E+00 9353074E+020 0. 5832000E+04 6803361E+010 0.
.6546537E+00 1010132E+05 1800000E+02 1782280E+040 0. 0. 3030396E+05
0 0 0. 4261000E+00 0 0 0.

CASE NUMBER 260
.6814829E-010 0. 0. 1877181E+01 2500170E+01 3378926E+02 3430000E+03
.3779645E+00 1190669E+020 0. 5832000E+04 6803361E+010 0.
.7095078E-00 1094772E+05 1800000E+02 2268886E+040 0. 0. 3857768E+05
0 0 0. 4579000E+00 0 0 0.

CASE NUMBER 261
.8000000E-010 0. 0. 2000000E+01 2022716E+01 3600000E+02 3430000E+03
.3779645E+00 1440000E+020 0. 5832000E+04 6803361E+010 0.
.7559289E-00 1166400E+05 1800000E+02 2744000E+040 0. 0. 4665600E+05
0 0 0. 4890000E+00 0 0 0.

CASE NUMBER 262
.8301867E-010 0. 0. 2024846E+01 2137811E+01 3644722E+02 3430000E+03
.3779645E+00 1494336E+020 0. 5832000E+04 6803361E+010 0.
.7653197E-00 1180890E+05 1800000E+02 2847540E+040 0. 0. 4841649E+05
0 0 0. 4955000E+00 0 0 0.

CASE NUMBER 263
.3333333E+000 0. 0. 0. 0. 0. 7290000E+03
0 0 0. 5832000E+04 6000000E+010 0. 0.
0 0 0. 1800000E+020 0 0 0.
0 0 0. 2848000E+00 0 0 0.

CASE NUMBER 264
.353534E-000 0. 0. 7071068E+00 1178511E+00 1272792E+02 7290000E+03
.3333333E+00 6383961E+010 0. 5832000E+04 6000000E+010 0.
.2357021E-00 4122847E+04 1800000E+02 2577404E+020 0. 0. 2081923E+04
0 0 0. 3197000E+00 0 0 0.
    
```

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TRANSGENERATED
DATA INPUT
CASE NUMBER 265
.1000000E-010 0. 0. 1000000E+01 3333333E+00 1800000E+02 7290000E+03
.3333333E+00 1800000E+020 0. 5832000E+04 6000000E+010 0.
.3333333E+00 5832000E+04 1800000E+02 7290000E+030 0. 0. 5832000E+04
0 0 0. 3445000E+00 0 0 0.

CASE NUMBER 266
.1837117E-010 0. 0. 1224745E+01 6123794E+00 2204541E+02 7290000E+03
.3333333E+00 3306811E+020 0. 5832000E+04 6000000E+010 0.
.4082483E-00 7142712E+04 1800000E+02 1339259E+040 0. 0. 1071407E+05
0 0 0. 3664000E+00 0 0 0.

CASE NUMBER 267
.2828427E-010 0. 0. 1414214E+01 9428090E+00 2545584E+02 7290000E+03
.3333333E+00 5091169E+020 0. 5832000E+04 6000000E+010 0.
.4714045E-00 8247693E+04 1800000E+02 2061923E+040 0. 0. 1649539E+05
0 0 0. 3913000E+00 0 0 0.

CASE NUMBER 268
.3852847E-010 0. 0. 1581138E+01 1317618E+01 2846050E+02 7290000E+03
.3333333E+00 7115125E+020 0. 5832000E+04 6000000E+010 0.
.5270463E-00 9221202E+04 1800000E+02 2881626E+040 0. 0. 2305300E+05
0 0 0. 4213000E+00 0 0 0.

CASE NUMBER 269
.5196152E-010 0. 0. 1732051E+01 1732051E+01 3117691E+02 7290000E+03
.3333333E+00 9353074E+020 0. 5832000E+04 6000000E+010 0.
.5773503E-00 1010132E+05 1800000E+02 3787895E+040 0. 0. 3030396E+05
0 0 0. 4571000E+00 0 0 0.

CASE NUMBER 270
.6547900E-010 0. 0. 1870829E+01 2182633E+01 3367482E+02 7290000E+03
.3333333E+00 1178622E+020 0. 5832000E+04 6000000E+010 0.
.6236096E-00 1091067E+05 1800000E+02 4773419E+040 0. 0. 3818736E+05
0 0 0. 4912000E+00 0 0 0.

CASE NUMBER 271
.8301867E-010 0. 0. 1887387E+01 2278840E+01 3415260E+02 7290000E+03
.3333333E+00 1229494E+020 0. 5832000E+04 6000000E+010 0.
.824555E-00 1106544E+05 1800000E+02 4979449E+040 0. 0. 3883539E+05
0 0 0. 4987000E+00 0 0 0.

CASE NUMBER 272
.3162278E+000 0. 0. 0 0 0 1000000E+04
0 0 0. 5832000E+04 5892100E+010 0. 0.
0 0 0. 1800000E+020 0 0 0.
0 0 0. 3015000E+00 0 0 0.
    
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TRANSGENERATED
DATA INPUT
CASE NUMBER 273
.353534E+000 0. 0. .7071068E+00 .1118034E+00 .1272792E+02 1000000E+04
.3162278E+00 6363961E+010 0. 0. .5832000E+04 .5692100E+010 0. 0.
.2236068E+00 4123847E+04 .1800000E+02 .353534E+030 0. 0. 0. 2081923E+04
0. 0. 0. 0. 0. 0. 0. 0.
CASE NUMBER 274
.1000000E+010 0. 0. 0. 1000000E+01 .3162278E+00 .1800000E+02 1000000E+04
.3162278E+00 1800000E+020 0. 0. .5832000E+04 .5692100E+010 0. 0.
.3162278E+00 5832000E+04 .1800000E+02 1000000E+040 0. 0. 0. 5832000E+04
0. 0. 0. 0. 0. 0. 0. 0.
CASE NUMBER 275
.1837117E+010 0. 0. 0. .1224745E+01 .5809475E+00 .2204541E+02 1000000E+04
.3162278E+00 3306811E+020 0. 0. .5832000E+04 .5692100E+010 0. 0.
.3872983E+00 7142712E+04 .1800000E+02 .1837117E+040 0. 0. 0. 1071407E+05
0. 0. 0. 0. 0. 0. 0. 0.
CASE NUMBER 276
.2828427E+010 0. 0. 0. .1414214E+01 .8944272E+00 .2545584E+02 1000000E+04
.3162278E+00 5091169E+020 0. 0. .5832000E+04 .5692100E+010 0. 0.
.4472136E+00 8247693E+04 .1800000E+02 .2828427E+040 0. 0. 0. 1649539E+05
0. 0. 0. 0. 0. 0. 0. 0.
CASE NUMBER 277
.3552847E+010 0. 0. 0. .1581139E+01 .1250000E+01 .2846050E+02 1000000E+04
.3162278E+00 7115125E+020 0. 0. .5832000E+04 .5692100E+010 0. 0.
.3090000E+00 5221202E+04 .1800000E+02 .3552847E+040 0. 0. 0. 2305300E+05
0. 0. 0. 0. 0. 0. 0. 0.
CASE NUMBER 278
.5196152E+010 0. 0. 0. .1732051E+01 .1643168E+01 .3117691E+02 1000000E+04
.3162278E+00 9352074E+020 0. 0. .5832000E+04 .5692100E+010 0. 0.
.5477226E+00 1010132E+05 .1800000E+02 .5196152E+040 0. 0. 0. 3030396E+05
0. 0. 0. 0. 0. 0. 0. 0.
CASE NUMBER 279
.5458113E+010 0. 0. 0. .1760682E+01 .1726007E+01 .3169227E+02 1000000E+04
.3162278E+00 9824604E+020 0. 0. .5832000E+04 .5692100E+010 0. 0.
.5567764E+00 1026830E+05 .1800000E+02 .5458113E+040 0. 0. 0. 3183172E+05
0. 0. 0. 0. 0. 0. 0. 0.
CASE NUMBER 280
.5724334E+010 0. 0. 0. .1788854E+01 .1810193E+01 .3219938E+02 1000000E+04
.3162278E+00 1030380E+030 0. 0. .5832000E+04 .5692100E+010 0. 0.
.5656854E+00 1043260E+05 .1800000E+02 .5724334E+040 0. 0. 0. 3338432E+05
0. 0. 0. 0. 0. 0. 0. 0.

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TRANSGENERATED
DATA INPUT
CASE NUMBER 281
.5994748E+010 0. 0. 0. .1816580E+01 .1895706E+01 .3269862E+02 1000000E+04
.3162278E+00 1079955E+030 0. 0. .5832000E+04 .5692100E+010 0. 0.
.5744543E+00 1059435E+05 .1800000E+02 .5994748E+040 0. 0. 0. 3496137E+05
0. 0. 0. 0. 0. 0. 0. 0.
CASE NUMBER 282
0. 0. 0. 0. 0. 0. 0. 0.
.2886751E+000 0. 0. 0. .5832000E+04 .5196152E+010 0. 0. 1728000E+04
0. 0. 0. 0. 0. 0. 0. 0.
0. 0. 0. 0. 0. 0. 0. 0.
0. 0. 0. 0. 0. 0. 0. 0.
CASE NUMBER 283
.353534E+000 0. 0. 0. .7071068E+00 .1020621E+00 .1272792E+02 1728000E+04
.2886751E+00 6363961E+010 0. 0. .5832000E+04 .5196152E+010 0. 0.
.2041241E+00 4123847E+04 .1800000E+02 .353534E+030 0. 0. 0. 2081923E+04
0. 0. 0. 0. 0. 0. 0. 0.
CASE NUMBER 284
.1000000E+010 0. 0. 0. 1000000E+01 .2886751E+00 .1800000E+02 1728000E+04
.2886751E+00 1800000E+020 0. 0. .5832000E+04 .5196152E+010 0. 0.
.2886751E+00 .5832000E+04 .1800000E+02 1728000E+040 0. 0. 0. 5832000E+04
0. 0. 0. 0. 0. 0. 0. 0.
CASE NUMBER 285
.1837117E+010 0. 0. 0. .1224745E+01 .5303201E+00 .2204541E+02 1728000E+04
.2886751E+00 3306811E+020 0. 0. .5832000E+04 .5196152E+010 0. 0.
.353534E+00 7142712E+04 .1800000E+02 .1837117E+040 0. 0. 0. 1071407E+05
0. 0. 0. 0. 0. 0. 0. 0.
CASE NUMBER 286
.2828427E+010 0. 0. 0. .1414214E+01 .8164966E+00 .2545584E+02 1728000E+04
.2886751E+00 5091169E+020 0. 0. .5832000E+04 .5196152E+010 0. 0.
.4082482E+00 8247693E+04 .1800000E+02 .2828427E+040 0. 0. 0. 1649539E+05
0. 0. 0. 0. 0. 0. 0. 0.
CASE NUMBER 287
.3552847E+010 0. 0. 0. .1581139E+01 .1141099E+01 .2846050E+02 1728000E+04
.2886751E+00 7115125E+020 0. 0. .5832000E+04 .5196152E+010 0. 0.
.4584355E+00 5221202E+04 .1800000E+02 .3552847E+040 0. 0. 0. 2305300E+05
0. 0. 0. 0. 0. 0. 0. 0.
CASE NUMBER 288
.4192374E+010 0. 0. 0. .1612452E+01 .1210234E+01 .2802413E+02 1728000E+04
.2886751E+00 7546273E+020 0. 0. .5832000E+04 .5196152E+010 0. 0.
.4854747E+00 9403817E+04 .1800000E+02 .4192374E+040 0. 0. 0. 2444893E+05
0. 0. 0. 0. 0. 0. 0. 0.

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TRANSGENERATED
DATA INPUT
CASE NUMBER 288          GROUP NUMBER 2
.443853E+010 .0 .0 .1643168E+01 .1280722E+01 .2857702E+02 .1728000E-04
.2836751E+00 .7885795E+020 .0 .5832000E-04 .5196152E+010 .0
.4743416E+00 .5582954E+04 .1800000E-02 .7666363E+040 .0 .0 .2587398E-05
.0 .0 .0 .4676000E+00 .0 .0 .0
CASE NUMBER 289          GROUP NUMBER 2
.4685296E+010 .0 .0 .1673320E+01 .1352528E+01 .3011976E+02 .1728000E-04
.2886751E+00 .8433533E+020 .0 .5832000E-04 .5196152E+010 .0
.4830459E+00 .9758803E+04 .1800000E-02 .8086192E+040 .0 .0 .2732465E-05
.0 .0 .0 .4760000E+00 .0 .0 .0
CASE NUMBER 291          GROUP NUMBER 2
.2626129E+000 .0 .0 .0 .0 .0 .3048625E+04
.0 .0 .0 .5832000E-04 .4727032E+010 .0
.0 .0 .0 .1800000E-020 .0 .0 .0
.0 .0 .0 .3283000E+00 .0 .0 .0
CASE NUMBER 292          GROUP NUMBER 2
.3535534E+000 .0 .0 .0 .0 .0 .3048625E+04
.2626129E+00 .8363981E+010 .0 .5832000E-04 .4727032E+010 .0
.1858952E+00 .4123847E+04 .1800000E-02 .1077852E+040 .0 .0 .2081923E-04
.0 .0 .0 .3533000E+00 .0 .0 .0
CASE NUMBER 293          GROUP NUMBER 2
.1000000E+010 .0 .0 .0 .0 .0 .3048625E+04
.2626129E+00 .1800000E+020 .0 .5832000E-04 .4727032E+010 .0
.2626129E+00 .5832000E+04 .1800000E-02 .3048625E+040 .0 .0 .5832000E+04
.0 .0 .0 .2810000E+00 .0 .0 .0
CASE NUMBER 294          GROUP NUMBER 2
.1837117E+010 .0 .0 .0 .0 .0 .3048625E+04
.2626129E+00 .3306811E+020 .0 .5832000E-04 .4727032E+010 .0
.3218338E+00 .7142712E+04 .1800000E-02 .5800682E+040 .0 .0 .1071407E+05
.0 .0 .0 .4100000E+00 .0 .0 .0
CASE NUMBER 295          GROUP NUMBER 2
.2828427E+010 .0 .0 .0 .0 .0 .3048625E+04
.2626129E+00 .5091169E+020 .0 .5832000E-04 .4727032E+010 .0
.3713907E+00 .8247693E+04 .1800000E-02 .8622814E+040 .0 .0 .1649538E+05
.0 .0 .0 .4418000E+00 .0 .0 .0
CASE NUMBER 296          GROUP NUMBER 2
.3043189E+010 .0 .0 .0 .0 .0 .3048625E+04
.2626129E+00 .5477740E+020 .0 .5832000E-04 .4727032E+010 .0
.3805822E+00 .8451371E+04 .1800000E-02 .8277542E+040 .0 .0 .1774788E+05
.0 .0 .0 .4490000E+00 .0 .0 .0
    
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TRANSGENERATED
DATA INPUT
CASE NUMBER 297          GROUP NUMBER 2
.3283127E+010 .0 .0 .1483240E+01 .8569392E+00 .2669831E+02 .3048625E-04
.2626129E+00 .5873629E+020 .0 .5832000E-04 .4727032E+010 .0
.3895179E+00 .8690234E+04 .1800000E-02 .9948052E+040 .0 .0 .1903056E-05
.0 .0 .0 .4565000E+00 .0 .0 .0
CASE NUMBER 298          GROUP NUMBER 2
.0 .0 .0 .1000000E+030 .0 .0 .3430000E+03
.3779845E+000 .1000000E+050 .0 .5832000E-04 .8603361E+01 .3430000E+07 .3779845E+02
.0 .0 .0 .1800000E-020 .0 .0 .3430000E+050 .0
.0 .0 .0 .5832000E-06 .2613000E+00 .0 .0 .0
CASE NUMBER 299          GROUP NUMBER 2
.3535534E+00 .3535534E+02 .1000000E-03 .7071068E+02 .7071068E+00 .1336306E+00 .1272792E+02 .3430000E+03
.3779845E+00 .8363981E+01 .1000000E+05 .3535534E+04 .5832000E-04 .8603361E+01 .3430000E+07 .3779845E+02
.2872812E+00 .4123847E+04 .1800000E-02 .1723688E+03 .8563981E+03 .3430000E+05 .8563981E+05 .2061923E-04
.1272792E+04 .1272792E+06 .5832000E-06 .2780000E+00 .0 .0 .0
CASE NUMBER 300          GROUP NUMBER 2
.1000000E+01 .1000000E+03 .1000000E-03 .1000000E+02 .1000000E+01 .3779845E+00 .1800000E+02 .3430000E+03
.3779845E+00 .1000000E+02 .1000000E+05 .1000000E+05 .5832000E-04 .8603361E+01 .3430000E+07 .3779845E+02
.3779845E+00 .5832000E+04 .1800000E-02 .3430000E+03 .1800000E-04 .3430000E+05 .1800000E+06 .3779845E+02
.1800000E+04 .1800000E+06 .5832000E-06 .2835000E+00 .0 .0 .0
CASE NUMBER 301          GROUP NUMBER 2
.1837117E+01 .1837117E+03 .1000000E-03 .1224745E+03 .1224745E+01 .8943651E+00 .2204541E+02 .3430000E+03
.3779845E+00 .3306811E+02 .1000000E+05 .1837117E+05 .5832000E-04 .8603361E+01 .3430000E+07 .3779845E+02
.4629100E+00 .7142712E+04 .1800000E-02 .8301312E+03 .3306811E+04 .3430000E+05 .3306811E+06 .1071407E+05
.2204541E+04 .2204541E+06 .5832000E-06 .3128000E+00 .0 .0 .0
CASE NUMBER 302          GROUP NUMBER 2
.2828427E+01 .2828427E+03 .1000000E-03 .1414214E+03 .1414214E+01 .1089045E+01 .2545584E+02 .3430000E+03
.3779845E+00 .5091169E+02 .1000000E+05 .2828427E+05 .5832000E-04 .8603361E+01 .3430000E+07 .3779845E+02
.5345225E+00 .8247693E+04 .1800000E-02 .9701505E+03 .5091169E+04 .3430000E+05 .5091169E+06 .1649538E+05
.2545584E+04 .2545584E+06 .5832000E-06 .3321000E+00 .0 .0 .0
CASE NUMBER 303          GROUP NUMBER 2
.3882847E+01 .3882847E+03 .1000000E-03 .1581139E+03 .1581139E+01 .1494036E+01 .2846050E+02 .3430000E+03
.3779845E+00 .7115125E+02 .1000000E+05 .3882847E+05 .5832000E-04 .8603361E+01 .3430000E+07 .3779845E+02
.5876143E+00 .8247693E+04 .1800000E-02 .1355827E+04 .7115125E+04 .3430000E+05 .7115125E+06 .2305300E+05
.2846050E+04 .2846050E+06 .5832000E-06 .3587000E+00 .0 .0 .0
CASE NUMBER 304          GROUP NUMBER 2
.5196152E+01 .5196152E+03 .1000000E-03 .1732051E+03 .1732051E+01 .1963961E+01 .3117681E+02 .3430000E+03
.3779845E+00 .9353074E+02 .1000000E+05 .5196152E+05 .5832000E-04 .8603361E+01 .3430000E+07 .3779845E+02
.6546537E+00 .1010132E+05 .1800000E-02 .1782280E+04 .9353074E+04 .3430000E+05 .9353074E+06 .3030386E+05
.3117681E+04 .3117681E+06 .5832000E-06 .3806000E+00 .0 .0 .0
    
```

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TRANSGENERATED DATA INPUT

Table with columns for CASE NUMBER, GROUP NUMBER, and numerical values. Includes sub-sections for CASE NUMBER 305, 304, 307, 308, 309, 310, 311, and 312.

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TRANSGENERATED DATA INPUT

Table with columns for CASE NUMBER, GROUP NUMBER, and numerical values. Includes sub-sections for CASE NUMBER 313, 314, 315, 316, 317, 318, 319, and 320.

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TRANSGENERATED

DATA INPUT

CASE NUMBER	GROUP NUMBER	1	2
353534E+00	353534E+02	1000000E+03	7071068E-02
3162278E+00	6323861E+01	1000000E+03	5832000E+04
2236668E+00	4123847E+04	1800000E+02	353534E+03
1272792E+04	1272792E+06	5832000E+04	2858000E+00
1000000E+01	1000000E+03	1000000E+03	1000000E+03
3162278E+00	1800000E+02	1000000E+03	1000000E+03
3162278E+00	5832000E+04	1800000E+02	1000000E+04
1800000E+04	1800000E+06	5832000E+04	3141000E+00
1837117E+01	1837117E+03	1000000E+03	1224745E+03
3162278E+00	3306811E+04	1000000E+05	1837117E+05
3872982E+00	7142712E+04	1800000E+02	1837117E+04
2204541E+04	2204541E+06	5832000E+04	3251000E+00
2828427E+01	2828427E+03	1000000E+03	1414214E+03
3162278E+00	5091189E+02	1000000E+05	2828427E+05
4472188E+00	8247893E+04	1800000E+02	2828427E+04
2545584E+04	2545584E+06	5832000E+04	3590000E+00
3952847E+01	3952847E+03	1000000E+03	1581139E+03
3162278E+00	7115125E+02	1000000E+05	3952847E+05
5000000E+00	9221202E+04	1800000E+02	3952847E+04
2846050E+04	2846050E+06	5832000E+04	3874000E+00
4182374E+01	4182374E+03	1000000E+03	1612452E+03
3162278E+00	7548373E+02	1000000E+05	4182374E+05
5099020E+00	9403817E+04	1800000E+02	4182374E+04
2802413E+04	2802413E+06	5832000E+04	3938000E+00
4438532E+01	4438532E+03	1000000E+03	1643168E+03
3162278E+00	7985795E+02	1000000E+05	4438532E+05
5196152E+00	9582954E+04	1800000E+02	4438532E+04
2957702E+04	2957702E+06	5832000E+04	4000000E+00
4855294E+01	4855294E+03	1000000E+03	1673200E+03
3162278E+00	8432533E+02	1000000E+05	4855294E+05
5291502E+00	9758803E+04	1800000E+02	4855294E+04
3011976E+04	3011976E+06	5832000E+04	4066000E+00

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TRANSGENERATED

DATA INPUT

CASE NUMBER	GROUP NUMBER	1	2
4838522E+01	4838522E+03	1000000E+03	1702838E+03
3162278E+00	8889340E+02	1000000E+05	4838522E+05
5385145E+00	921538E+04	1800000E+02	4838522E+04
3065280E+04	3065280E+06	5832000E+04	4135000E+00
5196152E+01	5196152E+03	1000000E+03	1732051E+03
3162278E+00	9353074E+02	1000000E+05	5196152E+05
5477226E+00	1010132E+05	1800000E+02	5196152E+04
3117891E+04	3117891E+06	5832000E+04	4205000E+00
0.	0.	1000000E+030.	0.
2886751E+000.	0.	1000000E+050.	5832000E+04
0.	0.	1800000E+020.	5196152E+01
0.	0.	5832000E+06	1728000E+06.
353534E+00	353534E+02	1000000E+03	7071068E-02
2886751E+00	6323861E+01	1000000E+03	5832000E+04
2061241E+00	4123847E+04	1800000E+02	353534E+03
1272792E+04	1272792E+06	5832000E+04	2858000E+00
1000000E+01	1000000E+03	1000000E+03	1000000E+03
2886751E+00	1800000E+02	1000000E+03	1000000E+03
2886751E+00	5832000E+04	1800000E+02	1728000E+04
1800000E+04	1800000E+06	5832000E+04	3245000E+00
1837117E+01	1837117E+03	1000000E+03	1224745E+03
2886751E+00	3306811E+04	1000000E+05	1837117E+05
353534E+00	7142712E+04	1800000E+02	3174538E+04
2204541E+04	2204541E+06	5832000E+04	3499000E+00
2828427E+01	2828427E+03	1000000E+03	1414214E+03
2886751E+00	5091189E+02	1000000E+05	2828427E+05
4882483E+00	8247893E+04	1800000E+02	4882483E+04
2545584E+04	2545584E+06	5832000E+04	3773000E+00
3043189E+01	3043189E+03	1000000E+03	1449139E+03
2886751E+00	5477740E+02	1000000E+05	3043189E+05
4183200E+00	8451371E+04	1800000E+02	5258831E+04
2804482E+04	2804482E+06	5832000E+04	3833000E+00

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TRANSGENERATED

DATA INPUT

CASE NUMBER	GROUP NUMBER	2
3263127E+01	3263127E+03	1000000E+03
2886751E+00	5873629E+02	1000000E+05
4281744E+00	8830254E+04	1800000E+02
2668931E+04	2668931E+06	5832000E+04

FRIDAY, JUL 2, 1978

TRANSGENERATED

DATA INPUT

CASE NUMBER	GROUP NUMBER	2
3263127E+01	3263127E+03	1000000E+03
2886751E+00	5873629E+02	1000000E+05
4281744E+00	8830254E+04	1800000E+02
2668931E+04	2668931E+06	5832000E+04

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FRIDAY, JUL 2, 1976

TRANSGENERATED

DATA INPUT

CASE NUMBER	353	GROUP NUMBER	2
2828427E+01	5858854E-03	2000000E+03	2828427E-03
1779845E+00	5091168E-02	4000000E+05	1131371E-06
5345225E+00	8247893E+04	1800000E+02	9701505E+03
5091168E-04	1018234E-07	1166400E+07	3042000E+00
CASE NUMBER	354	GROUP NUMBER	2
1852887E+01	7908894E-03	2000000E+03	3162278E-03
1779845E+00	7115125E-02	4000000E+05	1581138E-06
5876143E+00	8221202E-04	1800000E+02	1355827E+04
5882100E+04	1138420E-07	1166400E+07	3253000E+00
CASE NUMBER	355	GROUP NUMBER	2
5186152E+01	1039230E-04	2000000E+03	3484102E-03
1779845E+00	8253074E-02	4000000E+05	2078461E-06
6546537E+00	1010132E+05	1800000E+02	1782280E-04
6235383E-04	1247077E-07	1166400E+07	3308000E+00
CASE NUMBER	356	GROUP NUMBER	2
1852887E+01	7908894E-03	2000000E+03	3162278E-03
1779845E+00	7115125E-02	4000000E+05	1581138E-06
7071048E+00	1091047E-05	1800000E+02	2245930E-04
6734983E-04	1346997E-07	1166400E+07	3797000E+00
CASE NUMBER	357	GROUP NUMBER	2
6830520E+01	1386104E-04	2000000E+03	3794733E-03
1779845E+00	1229444E-03	4000000E+05	2722208E-06
7171372E+00	1106544E+05	1800000E+02	2342868E-04
6830520E-04	1386104E-07	1166400E+07	3849000E+00
CASE NUMBER	358	GROUP NUMBER	2
7117082E+01	1423418E-04	2000000E+03	3847077E-03
1779845E+00	1221077E-03	4000000E+05	2846837E-06
7270282E+00	1121800E-05	1800000E+02	2441163E-04
6824738E-04	1384948E-07	1166400E+07	3905000E+00
CASE NUMBER	359	GROUP NUMBER	2
0	0	2000000E+030	0
3333333E+000	0	4000000E+050	5832000E-04
0	0	1800000E+020	6000000E-01
0	0	1166400E+07	1458000E+060
CASE NUMBER	360	GROUP NUMBER	2
3535534E+00	7071068E-02	2000000E+03	1414214E-03
3333333E+00	6362861E+01	4000000E+05	1414214E-05
2357023E+00	4123847E-04	1800000E+02	2577404E-03
2545584E-04	5091168E-06	1166400E+07	2651000E-00

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CASE NUMBER	361	GROUP NUMBER	2
1000000E+01	2000000E-03	2000000E+03	1000000E-03
3333333E+00	4000000E-02	4000000E+05	4000000E-05
3333333E+00	8000000E-04	1800000E+02	7200000E-03
3600000E+04	7200000E+06	1166400E+07	2819000E+00
CASE NUMBER	362	GROUP NUMBER	2
1837117E+01	3674235E-03	2000000E+03	2449490E-03
3333333E+00	3308811E-02	4000000E+05	7348488E-05
4082483E+00	7142712E-04	1800000E+02	1339259E-04
4090821E+04	8818163E-06	1166400E+07	3009000E+00
CASE NUMBER	363	GROUP NUMBER	2
2828427E+01	5858854E-03	2000000E+03	2828427E-03
3333333E+00	5091168E-02	4000000E+05	1131371E-06
4714045E+00	8247893E+04	1800000E+02	2061823E-04
5091168E+04	1018234E-07	1166400E+07	3228000E+00
CASE NUMBER	364	GROUP NUMBER	2
1852887E+01	7908894E-03	2000000E+03	3162278E-03
3333333E+00	7115125E-02	4000000E+05	1581138E-06
5270463E+00	8221202E-04	1800000E+02	2881626E-04
5882100E-04	1138420E-07	1166400E+07	3472000E+00
CASE NUMBER	365	GROUP NUMBER	2
5186152E+01	1039230E-04	2000000E+03	3484102E-03
3333333E+00	8253074E-02	4000000E+05	2078461E-06
5773503E+00	1010132E+05	1800000E+02	1787985E-04
6235383E-04	1247077E-07	1166400E+07	3761000E+00
CASE NUMBER	366	GROUP NUMBER	2
5458113E+01	1091823E-04	2000000E+03	3521363E-03
3333333E+00	9824604E-02	4000000E+05	2182245E-06
3888838E+00	1028830E+05	1800000E+02	3978965E-04
6238484E-04	1267897E-07	1166400E+07	3824000E+00
CASE NUMBER	367	GROUP NUMBER	2
0	0	2000000E+030	0
3162278E+000	0	4000000E+050	5832000E-04
0	0	1800000E+020	6000000E-01
0	0	1166400E+07	2000000E+060
CASE NUMBER	368	GROUP NUMBER	2
3535534E+00	7071068E-02	2000000E+03	1414214E-03
3162278E+00	6362861E-01	4000000E+05	1414214E-05
2357023E+00	4123847E-04	1800000E+02	2577404E-03
2545584E-04	5091168E-06	1166400E+07	2701000E-00

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CASE NUMBER	369	GROUP NUMBER	2
1000000E+01	2000000E+03	2000000E+03	2000000E+03
162279E+00	1800000E+02	4000000E+05	4000000E+05
3162279E+00	5832000E+04	1800000E+02	1800000E+02
3600000E+04	7200000E+06	1166400E+07	2891000E+00
CASE NUMBER	370	GROUP NUMBER	2
183711E+01	3574235E+03	2000000E+03	2449490E+02
3162279E+00	3306811E+02	4000000E+05	7348489E+05
3872863E+00	7142712E+04	1800000E+02	183711E+04
4409082E+04	8818183E+06	1166400E+07	3097000E+00
CASE NUMBER	371	GROUP NUMBER	2
2828427E+01	5656854E+02	2000000E+03	2828427E+02
3162279E+00	5091169E+02	4000000E+05	1131371E+06
4472136E+00	8247693E+04	1800000E+02	2828427E+04
5091169E+04	1018234E+07	1166400E+07	3323000E+00
CASE NUMBER	372	GROUP NUMBER	2
3852867E+01	7905698E+03	2000000E+03	3162279E+03
3162279E+00	7115125E+02	4000000E+05	1581139E+06
5090000E+00	9221202E+04	1800000E+02	3852867E+04
5492100E+04	1138420E+07	1166400E+07	3576000E+00
CASE NUMBER	373	GROUP NUMBER	2
4192374E+01	8284748E+03	2000000E+03	3224903E+03
3162279E+00	7546273E+02	4000000E+05	1676950E+06
3899020E+00	5403317E+04	1800000E+02	4192374E+04
5084828E+04	1158985E+07	1166400E+07	3634000E+00
CASE NUMBER	374	GROUP NUMBER	2
4436553E+01	8873105E+03	2000000E+03	3286335E+03
3162279E+00	7985795E+02	4000000E+05	1774621E+06
5196152E+00	9582954E+04	1800000E+02	4436553E+04
5915404E+04	1183081E+07	1166400E+07	3894000E+00
CASE NUMBER	375	GROUP NUMBER	2
4695298E+01	9370592E+03	2000000E+03	3346640E+03
3162279E+00	8423533E+02	4000000E+05	1874118E+06
5291503E+00	9758003E+04	1800000E+02	4695298E+04
6023858E+04	1294790E+07	1166400E+07	3756000E+00
CASE NUMBER	376	GROUP NUMBER	2
0.	0.	2000000E+030.	0.
2886751E+000.	0.	4000000E+050.	5832000E+04
0.	0.	1800000E+020.	5196152E+01
0.	0.	1166400E+07	6812000E+08
			5773503E+02
			3456000E+060.
			0.
			1728000E+04

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CASE NUMBER	377	GROUP NUMBER	2
3535534E+00	7071068E+02	2000000E+03	1414214E+03
2886751E+00	6363981E+01	4000000E+05	1414214E+05
2041241E+00	4123847E+04	1800000E+02	6109403E+02
2545584E+04	5091169E+06	1166400E+07	2897000E+00
CASE NUMBER	378	GROUP NUMBER	2
1000000E+01	2000000E+02	2000000E+03	2000000E+02
2886751E+00	1800000E+02	4000000E+05	4000000E+05
2886751E+00	3822000E+04	1800000E+02	1729000E+04
3800000E+04	7200000E+06	1166400E+07	3012000E+00
CASE NUMBER	379	GROUP NUMBER	2
183711E+01	3574235E+03	2000000E+03	2449490E+02
2886751E+00	3206811E+02	4000000E+05	7348489E+05
3535534E+00	7142712E+04	1800000E+02	2174539E+04
4409082E+04	8818183E+06	1166400E+07	3233000E+00
CASE NUMBER	380	GROUP NUMBER	2
2828427E+01	5656854E+02	2000000E+03	2828427E+02
2886751E+00	5091169E+02	4000000E+05	1131371E+06
4082892E+00	8247693E+04	1800000E+02	4897522E+04
5091169E+04	1018234E+07	1166400E+07	3490000E+00
CASE NUMBER	381	GROUP NUMBER	2
3043188E+01	6086278E+03	2000000E+03	2892752E+02
2886751E+00	5477740E+02	4000000E+05	1217276E+06
4183300E+00	8451371E+04	1800000E+02	5258831E+04
5218998E+04	1043379E+07	1166400E+07	3545000E+00
CASE NUMBER	382	GROUP NUMBER	2
3283127E+01	5520255E+03	2000000E+03	2866479E+03
2886751E+00	5878298E+02	4000000E+05	1305251E+06
4291748E+00	8850284E+04	1800000E+02	5838884E+04
5328683E+04	1067932E+07	1166400E+07	3802000E+00
CASE NUMBER	383	GROUP NUMBER	2
0.	0.	2000000E+030.	0.
2626128E+000.	0.	4000000E+050.	5832000E+04
0.	0.	1800000E+020.	4727032E+01
0.	0.	1166400E+07	6897250E+060.
			0.
			3048625E+04
			5252257E+02
			0.
			1219450E+08

CASE NUMBER 384

3535534E+00	7071068E+02	2000000E+03	1414214E+03	7071068E+00	9284767E+01	1272792E+02	3048625E+04
2886751E+00	6363981E+01	4000000E+05	1414214E+05	5832000E+04	4727032E+01	1219450E+08	5252257E+02
1858933E+00	4123847E+04	1800000E+02	6109403E+02	1272792E+04	6897250E+06	2545584E+06	2061923E+04
2545584E+04	5091169E+06	1166400E+07	2897000E+00				

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TRANSGENERATED DATA INPUT

Case number 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416. Each case includes a list of numerical values and a corresponding group number (2).

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TRANSGENERATED DATA INPUT

Case number 409, 410, 411, 412, 413, 414, 415, 416. Each case includes a list of numerical values and a corresponding group number (2).

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TRANSGENERATED

DATA INPUT

CASE NUMBER	417	GROUP NUMBER	2
5994748E+01	2997374E-03	5000000E-02	8082951E-02
3182278E+00	2158109E-03	2500000E-04	1498687E-03
5744563E+00	8475483E-05	3600000E-02	5994748E+04
328982E+04	1634931E-08	2332800E-07	5232000E-00
CASE NUMBER	418	GROUP NUMBER	2
5263280E+01	3134645E-03	5000000E-02	8219544E+03
3162278E+00	2258944E-03	2500000E-04	1567323E-05
5830852E+00	8602941E-05	3600000E-02	6268290E+04
3319036E+04	1658518E-06	2332800E-07	5332000E-00
CASE NUMBER	419	GROUP NUMBER	2
0	0	5000000E-020	0
2886751E+000	0	2500000E-040	4665600E-05
0	0	3600000E-020	1039230E-02
0	0	2332800E-07	8640000E-050
CASE NUMBER	420	GROUP NUMBER	2
3525534E+00	1767767E-02	5000000E-02	3535534E-02
2886751E+00	1272792E-02	2500000E-04	8828835E-03
2041241E+00	3298077E-05	3600000E-02	6109403E-03
1272792E+04	638961E-05	2332800E-07	3338000E-00
CASE NUMBER	421	GROUP NUMBER	2
1000000E+01	5000000E-02	5000000E-02	5000000E-02
2886751E+00	3600000E-02	2500000E-04	2500000E-04
2886751E+00	4665600E-05	3600000E-02	1728000E-04
1800000E+04	8000000E-05	2332800E-07	3920000E-00
CASE NUMBER	422	GROUP NUMBER	2
183717E+01	9185587E-02	5000000E-02	6123724E-02
2886751E+00	663822E-02	2500000E-04	4582793E-04
3535534E+00	5714170E-05	3600000E-02	3174539E-04
2204541E+04	1102270E-06	2332800E-07	4092000E-00
CASE NUMBER	423	GROUP NUMBER	2
2828427E+01	1414214E-03	5000000E-02	7071068E-02
2886751E+00	118224E-03	2500000E-04	7071068E-04
488443E+00	658155E-05	3600000E-02	488443E-04
2545584E+04	272792E-06	2332800E-07	4405000E-00
CASE NUMBER	424	GROUP NUMBER	2
3952847E+01	1079424E-03	5000000E-02	7805694E-02
2886751E+00	1423025E-03	2500000E-04	882218E-04
4564355E+00	7376961E-05	3600000E-02	6830520E-04
2846050E+04	1423025E-06	2332800E-07	4796000E-00

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TRANSGENERATED

DATA INPUT

CASE NUMBER	425	GROUP NUMBER	2
4192374E+01	2096187E-03	5000000E-02	8062258E-02
2886751E+00	1509255E-03	2500000E-04	1048094E-05
4654767E+00	7523054E-05	3600000E-02	724422E-04
2902413E+04	1451206E-06	2332800E-07	4892000E-00
CASE NUMBER	426	GROUP NUMBER	2
4028553E+01	2718276E-03	5000000E-02	8215838E-02
2886751E+00	1587158E-03	2500000E-04	1103138E-05
4749418E+00	7889835E-05	3600000E-02	7688383E-04
2957702E+04	1478851E-06	2332800E-07	4992000E-00
CASE NUMBER	427	GROUP NUMBER	2
4695284E+01	2342648E-03	5000000E-02	8366600E-02
2886751E+00	1686707E-02	2500000E-04	1171324E-05
4830459E+00	7807042E-05	3600000E-02	8096192E-04
3011976E+04	1505988E-06	2332800E-07	5081000E-00
CASE NUMBER	428	GROUP NUMBER	2
4938622E+01	2488261E-03	5000000E-02	8514682E-02
2886751E+00	1777848E-02	2500000E-04	1254631E-05
4918940E+00	7945231E-05	3600000E-02	8533784E-04
3085290E+04	1522845E-06	2332800E-07	5176000E-00
CASE NUMBER	429	GROUP NUMBER	2
0	0	5000000E-020	0
2626128E+000	0	2500000E-040	4665600E-05
0	0	3600000E-020	9454063E-01
0	0	2332800E-07	1524313E-060
CASE NUMBER	430	GROUP NUMBER	2
3535534E+00	1767767E-02	5000000E-02	3535534E-02
2826128E+00	1272792E-02	2500000E-04	8828835E-03
1856953E+00	3298077E-05	3600000E-02	1077852E-04
1272792E+04	638961E-05	2332800E-07	3630000E-00
CASE NUMBER	431	GROUP NUMBER	2
1000000E+01	5000000E-02	5000000E-02	5000000E-02
2826128E+00	3600000E-02	2500000E-04	2500000E-04
2826128E+00	4665600E-05	3600000E-02	3048825E-04
1800000E+04	8000000E-05	2332800E-07	3997000E-00
CASE NUMBER	432	GROUP NUMBER	2
183717E+01	9185587E-02	5000000E-02	6123724E-02
2826128E+00	663822E-02	2500000E-04	4582793E-04
3716338E+00	5714170E-05	3600000E-02	3080822E-04
2204541E+04	1102270E-06	2332800E-07	4302000E-00

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TRANSGENERATED
DATA INPUT
CASE NUMBER 433
.2626427E+01 .1414214E+03 .5000000E+02 .7071068E+02 .1414214E+01 .7427814E+00 .5091169E+02 .3048625E+04
.2626129E+00 .1018234E+03 .2500000E+04 .7071068E+04 .4665600E+05 .9454083E+01 .7821562E+07 .1313064E+02
.3713907E+00 .6588135E+05 .3600000E+02 .8622814E+04 .5091169E+04 .1524313E+06 .2945584E+06 .1319631E+06
.2545584E+04 .1272792E+06 .2322800E+07 .4671000E+00
CASE NUMBER 434
.3042188E+01 .1521595E+03 .5000000E+02 .7245688E+02 .1448138E+01 .7991806E+00 .5216866E+02 .3048625E+04
.2626129E+00 .1085548E+03 .2500000E+04 .7607872E+04 .4665600E+05 .9454083E+01 .7821562E+07 .1313064E+02
.3805622E+00 .6781097E+05 .3600000E+02 .8277542E+04 .5477740E+04 .1524313E+06 .2738670E+06 .1419830E+06
.2608448E+04 .1304224E+06 .2322800E+07 .4761000E+00
CASE NUMBER 435
.3283127E+01 .1631564E+03 .5000000E+02 .7415188E+02 .1483240E+01 .8569292E+00 .5239662E+02 .3048625E+04
.2626129E+00 .1174726E+02 .2500000E+04 .8157818E+04 .4665600E+05 .9454083E+01 .7821562E+07 .1313064E+02
.3895178E+00 .6920203E+05 .3600000E+02 .9948052E+04 .5873629E+04 .1524313E+06 .2938615E+06 .1522445E+06
.2689831E+04 .1334816E+06 .2322800E+07 .4856000E+00
CASE NUMBER 436
0 0 0 0 0 0 0 .3430000E+03
.3779845E+00 0 0 0 4665600E+05 .1360672E+020 0 0
0 0 .3600000E+020 0 0 0
0 0 0 .2747000E+00
CASE NUMBER 437
.353534E+00 0 0 0 .7071068E+00 .1338306E+00 .2545584E+02 .3430000E+03
.3779845E+00 .1272792E+020 0 0 4665600E+05 .1360672E+020 0
.2672612E+00 .3299077E+05 .3600000E+02 .1212888E+030 0 0 .1649539E+05
0 0 0 .2919000E+00
CASE NUMBER 438
.1000000E+010 0 0 0 .1000000E+01 .3779845E+00 .3600000E+02 .3430000E+03
.3779845E+00 .3600000E+020 0 0 4665600E+05 .1360672E+020 0
.3779845E+00 .4665600E+05 .3600000E+02 .3430000E+030 0 0 .4665600E+05
0 0 0 .3168000E+00
CASE NUMBER 439
.1837117E+010 0 0 0 .1224745E+01 .6943651E+00 .4409082E+02 .3430000E+03
.3779845E+00 .6813822E+020 0 0 4665600E+05 .1360672E+020 0
.4829100E+00 .574170E+05 .3600000E+02 .6301312E+030 0 0 .8571255E+05
0 0 0 .3400000E+00
CASE NUMBER 440
.2328427E+010 0 0 0 .1414214E+01 .1089045E+01 .5091169E+02 .3430000E+03
.3779845E+00 .1018224E+030 0 0 4665600E+05 .1360672E+020 0
.5345225E+00 .6588135E+05 .3600000E+02 .9701505E+030 0 0 .1319631E+06
0 0 0 .3822000E+00

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TRANSGENERATED
DATA INPUT
CASE NUMBER 441
.3518014E+010 0 0 0 .1576615E+01 .1481248E+01 .5675813E+02 .3430000E+03
.3779845E+00 .410845E+030 0 0 4665600E+05 .1360672E+020 0
.5859044E+00 .7355854E+05 .3600000E+02 .1344222E+040 0 0 .1829455E+06
0 0 0 .3879000E+00
CASE NUMBER 442
.5186152E+010 0 0 0 .1732051E+01 .1983961E+01 .6235383E+02 .3430000E+03
.3779845E+00 .1870615E+030 0 0 4665600E+05 .1360672E+020 0
.6546537E+00 .8081056E+05 .3600000E+02 .1782280E+040 0 0 .2424317E+06
0 0 0 .4187000E+00
CASE NUMBER 443
.8547400E+010 0 0 0 .1870829E+01 .2474874E+01 .6734983E+02 .3430000E+03
.3779845E+00 .2357244E+030 0 0 4665600E+05 .1360672E+020 0
.7071068E+00 .8728528E+05 .3600000E+02 .2245830E+040 0 0 .3054888E+06
0 0 0 .4523000E+00
CASE NUMBER 444
.8920520E+010 0 0 0 .1897367E+01 .2581694E+01 .6830520E+02 .3430000E+03
.3779845E+00 .2458887E+030 0 0 4665600E+05 .1360672E+020 0
.7177272E+00 .8852354E+05 .3600000E+02 .2342888E+040 0 0 .3186847E+06
0 0 0 .4580000E+00
CASE NUMBER 445
.7117092E+010 0 0 0 .1923538E+01 .2690088E+01 .6924738E+02 .3430000E+03
.3779845E+00 .2562153E+030 0 0 4665600E+05 .1360672E+020 0
.7270292E+00 .8974461E+05 .3600000E+02 .2441163E+040 0 0 .3220505E+06
0 0 0 .4641000E+00
CASE NUMBER 446
.7407584E+010 0 0 0 .1949259E+01 .2799798E+01 .7017692E+02 .3430000E+03
.3779845E+00 .2688723E+030 0 0 4665600E+05 .1360672E+020 0
.7367884E+00 .9094928E+05 .3600000E+02 .2540794E+040 0 0 .3458073E+06
0 0 0 .4704000E+00
CASE NUMBER 447
.7701882E+010 0 0 0 .1974842E+01 .2911038E+01 .7109430E+02 .3430000E+03
.3779845E+00 .2772678E+030 0 0 4665600E+05 .1360672E+020 0
.7464200E+00 .9213822E+05 .3600000E+02 .2641746E+040 0 0 .3593380E+06
0 0 0 .4776000E+00
CASE NUMBER 448
.8000000E+010 0 0 0 .2000000E+01 .3023718E+01 .7200000E+02 .3430000E+03
.3779845E+00 .2880000E+030 0 0 4665600E+05 .1360672E+020 0
.7559289E+00 .9331200E+05 .3600000E+02 .2744000E+040 0 0 .3732480E+06
0 0 0 .4828000E+00

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TRANSGENERATED DATA INPUT				
CASE NUMBER			GROUP NUMBER	
0	0.	0.	2	.7290000E+03
3333333E+000	0.	0.	4665600E+05	.1200000E+020
0	0.	.3600000E+020	0.	0.
0	0.	2884000E+00	0.	0.
CASE NUMBER 450			GROUP NUMBER 2	
3335534E+000	0.	0.	.7071068E+00	.1178511E+00
3333333E+000	.1272782E+020	0.	4665600E+05	.1200000E+020
2357023E+00	.3289077E+05	.3600000E+02	2577404E+030	0.
0	0.	0.	3109000E+00	.1648539E+05
0	0.	3341000E+00	0.	0.
CASE NUMBER 451			GROUP NUMBER 2	
1000000E+010	0.	0.	1000000E+01	.3333333E+00
3333333E+000	.3600000E+020	0.	4665600E+05	.1200000E+020
3333333E+000	.4665600E+05	.3600000E+02	7290000E+030	0.
0	0.	0.	0.	.4665600E+05
0	0.	3341000E+00	0.	0.
CASE NUMBER 452			GROUP NUMBER 2	
1837117E+010	0.	0.	.1224745E+01	.6123724E+00
3333333E+000	.6613622E+020	0.	4665600E+05	.1200000E+020
4092483E+000	.5714170E+05	.3600000E+02	1339259E+040	0.
0	0.	0.	3559000E+00	.8571255E+05
0	0.	0.	0.	0.
CASE NUMBER 453			GROUP NUMBER 2	
2828427E+010	0.	0.	.1414214E+01	.8428090E+00
3333333E+000	.7018234E+030	0.	4665600E+05	.1200000E+020
4714045E+000	.6598155E+05	.3600000E+02	2081923E+040	0.
0	0.	0.	3820000E+00	.1319631E+06
0	0.	0.	0.	0.
CASE NUMBER 454			GROUP NUMBER 2	
3852847E+010	0.	0.	.1581139E+01	.1317616E+01
3333333E+000	.1423025E+030	0.	4665600E+05	.1200000E+020
5270463E+000	.7378961E+05	.3600000E+02	2881626E+040	0.
0	0.	0.	4123000E+00	.1844240E+06
0	0.	0.	0.	0.
CASE NUMBER 455			GROUP NUMBER 2	
5196152E+010	0.	0.	.1732051E+01	.1732051E+01
3333333E+000	.1870615E+030	0.	4665600E+05	.1200000E+020
5773503E+000	.6081056E+05	.3600000E+02	3787985E+040	0.
0	0.	0.	4452000E+00	.2424317E+06
0	0.	0.	0.	0.
CASE NUMBER 456			GROUP NUMBER 2	
5458113E+010	0.	0.	.1760682E+01	.1815371E+01
3333333E+000	.1964921E+030	0.	4665600E+05	.1200000E+020
5868939E+000	.8214636E+05	.3600000E+02	3978965E+040	0.
0	0.	0.	4526000E+00	.2546537E+06
0	0.	0.	0.	0.

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TRANSGENERATED DATA INPUT				
CASE NUMBER			GROUP NUMBER	
0	0.	0.	2	.7290000E+03
5724334E+010	0.	0.	.1788854E+01	.1908111E+01
3333333E+000	.2060780E+030	0.	4665600E+05	.1200000E+020
5962848E+000	.3346079E+05	.3600000E+02	4173040E+040	0.
0	0.	0.	4601000E+00	.2670745E+06
0	0.	0.	0.	0.
CASE NUMBER 459			GROUP NUMBER 2	
5994748E+010	0.	0.	.1816590E+01	.1998248E+01
3333333E+000	.2158108E+030	0.	4665600E+05	.1200000E+020
8055301E+000	.8475483E+05	.3600000E+02	4370171E+040	0.
0	0.	0.	4685000E+00	.2796809E+06
0	0.	0.	0.	0.
CASE NUMBER 459			GROUP NUMBER 2	
8269290E+010	0.	0.	.1843909E+01	.2089763E+01
3333333E+000	.2256944E+030	0.	4665600E+05	.1200000E+020
6146383E+000	.8602941E+05	.3600000E+02	4570313E+040	0.
0	0.	0.	4770000E+00	.2925000E+06
0	0.	0.	0.	0.
CASE NUMBER 460			GROUP NUMBER 2	
8547900E+010	0.	0.	.1870828E+01	.2182833E+01
3333333E+000	.2357244E+030	0.	4665600E+05	.1200000E+020
8236086E+000	.8728538E+05	.3600000E+02	4772418E+040	0.
0	0.	0.	4855000E+00	.3054988E+06
0	0.	0.	0.	0.
CASE NUMBER 461			GROUP NUMBER 2	
3182278E+000	0.	0.	0.	.1000000E+04
0	0.	0.	.4665600E+05	.1738420E+020
0	0.	.3600000E+020	0.	0.
0	0.	2942000E+00	0.	0.
0	0.	0.	0.	0.
CASE NUMBER 462			GROUP NUMBER 2	
3535534E+000	0.	0.	.7071068E+00	.1178034E+00
3182278E+000	.1272782E+030	0.	4665600E+05	.1138420E+020
2236088E+000	.3289077E+05	.3600000E+02	3535534E+030	0.
0	0.	0.	3178000E+00	.1648539E+05
0	0.	0.	0.	0.
CASE NUMBER 463			GROUP NUMBER 2	
1000000E+010	0.	0.	1000000E+01	.3182278E+00
3182278E+000	.3600000E+020	0.	4665600E+05	.1138420E+020
3182278E+000	.4665600E+05	.3600000E+02	1000000E+040	0.
0	0.	0.	3399000E+00	.4885800E+05
0	0.	0.	0.	0.
CASE NUMBER 464			GROUP NUMBER 2	
1837117E+010	0.	0.	.1224745E+01	.6099475E+00
3182278E+000	.6613622E+030	0.	4665600E+05	.1138420E+020
3872983E+000	.5714170E+05	.3600000E+02	1837117E+040	0.
0	0.	0.	3645000E+00	.8571255E+05
0	0.	0.	0.	0.

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TRANSGENERATED
DATA INPUT
CASE NUMBER 465
.2828427E+010 .0 .0 .1414214E-01 .8944272E+00 .5091169E-02 .1000000E-04
.3182278E+00 .1018234E-030 .0 .4665600E-05 .1138420E+020 .0 .0
.4472138E+00 .6598155E-05 .3600000E-02 .2828427E+040 .0 .0 .1319821E-08
0 .0 .0 .3823000E+00
CASE NUMBER 466
.3952847E+010 .0 .0 .1581138E-01 .1250000E+01 .5692100E-02 .1000000E-04
.3182278E+00 .1423025E+030 .0 .4665600E-05 .1138420E+020 .0 .0
.5000000E+00 .7376861E-05 .3600000E-02 .3852847E+040 .0 .0 .1844240E-06
0 .0 .0 .4233000E+00
CASE NUMBER 467
.5196152E+010 .0 .0 .1732051E-01 .1643188E+01 .6235383E-02 .1000000E-04
.3182278E+00 .1270415E+030 .0 .4665600E-05 .1138420E+020 .0 .0
.5477226E+00 .8081056E-05 .3600000E-02 .5196152E+040 .0 .0 .2424317E-06
0 .0 .0 .4587000E+00
CASE NUMBER 468
.5488113E+010 .0 .0 .1760682E-01 .1726007E+01 .6338454E-02 .1000000E-04
.3182278E+00 .1864821E+030 .0 .4665600E-05 .1138420E+020 .0 .0
.5587754E+00 .8214638E-05 .3600000E-02 .5488113E+040 .0 .0 .2546537E-06
0 .0 .0 .4668000E+00
CASE NUMBER 469
.5724334E+010 .0 .0 .1788854E-01 .1810193E+01 .6439876E-02 .1000000E-04
.3182278E+00 .2060760E+030 .0 .4665600E-05 .1138420E+020 .0 .0
.5658854E+00 .8346079E-05 .3600000E-02 .5724334E+040 .0 .0 .2670745E-06
0 .0 .0 .4754000E+00
CASE NUMBER 470
.2886751E+000 .0 .0 .0 .0 .0 .1728000E-04
.2886751E+000 .0 .0 .4665600E-05 .1039230E+020 .0 .0
0 .0 .3600000E+020 .0 .0 .0
0 .0 .0 .3028000E+00
CASE NUMBER 471
.2525534E+000 .0 .0 .7071068E-00 .1020621E+00 .2545584E-02 .1728000E-04
.2886751E+00 .1272792E-020 .0 .4665600E-05 .1039230E+020 .0 .0
.2041241E+00 .3299077E-05 .3600000E-02 .6109403E+030 .0 .0 .1649539E-05
0 .0 .0 .3287000E+00
CASE NUMBER 472
.1000000E+010 .0 .0 .1000000E-01 .2886751E+00 .3600000E-02 .1728000E-04
.2886751E+00 .3600000E+020 .0 .4665600E-05 .1039230E+020 .0 .0
.2886751E+00 .4665600E+05 .3600000E-02 .1728000E+040 .0 .0 .4665600E-05
0 .0 .0 .3548000E+00

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TRANSGENERATED
DATA INPUT
CASE NUMBER 493
.1837117E+010 .0 .0 .1224745E-01 .824508E-00 .4409082E-02 .1728000E-04
.2886751E+00 .6813822E-020 .0 .4665600E-05 .1039230E+020 .0 .0
.3535534E+00 .5714170E-05 .3600000E-02 .3174539E+040 .0 .0 .8571255E-05
0 .0 .0 .3817000E+00
CASE NUMBER 474
.2828427E+010 .0 .0 .1414214E-01 .8144966E+00 .5091169E-02 .1728000E-04
.2886751E+00 .1018234E-030 .0 .4665600E-05 .1039230E+020 .0 .0
.4082483E+00 .6598155E-05 .3600000E-02 .4887522E+040 .0 .0 .1319821E-08
0 .0 .0 .4125000E+00
CASE NUMBER 475
.3952847E+010 .0 .0 .1581138E-01 .1141088E+01 .5692100E-02 .1728000E-04
.2886751E+00 .1423025E+030 .0 .4665600E-05 .1039230E+020 .0 .0
.4564255E+00 .7376861E-05 .3600000E-02 .6830520E+040 .0 .0 .1844240E-06
0 .0 .0 .4458000E+00
CASE NUMBER 476
.4192374E+010 .0 .0 .1612452E-01 .1210234E+01 .5804826E-02 .1728000E-04
.2886751E+00 .1509255E+030 .0 .4665600E-05 .1039230E+020 .0 .0
.4654747E+00 .7523054E-05 .3600000E-02 .7244422E+040 .0 .0 .1955994E-06
0 .0 .0 .4532000E+00
CASE NUMBER 477
.2828427E+010 .0 .0 .0 .0 .0 .1048625E-04
.2828427E+000 .0 .0 .4665600E-05 .9454063E+010 .0 .0
0 .0 .3600000E+020 .0 .0 .0
0 .0 .0 .3163000E+00
CASE NUMBER 478
.3535534E+000 .0 .0 .7071068E-00 .9284767E-01 .2545584E-02 .3048625E-04
.2828427E+00 .1272792E-020 .0 .4665600E-05 .9454063E+010 .0 .0
.1858938E+00 .3299077E-05 .3600000E-02 .1077852E+040 .0 .0 .1649539E-05
0 .0 .0 .3437000E+00
CASE NUMBER 479
.1000000E+010 .0 .0 .1000000E-01 .2828427E+00 .3600000E-02 .3048625E-04
.2828427E+00 .3600000E+020 .0 .4665600E-05 .9454063E+010 .0 .0
.2828427E+00 .4665600E+05 .3600000E-02 .3048625E+040 .0 .0 .4665600E-05
0 .0 .0 .3730000E+00
CASE NUMBER 480
.1837117E+010 .0 .0 .1224745E-01 .824508E-00 .4409082E-02 .3048625E-04
.2828427E+00 .6813822E-020 .0 .4665600E-05 .9454063E+010 .0 .0
.3218338E+00 .5714170E-05 .3600000E-02 .5800882E+040 .0 .0 .8571255E-05
0 .0 .0 .4032000E+00

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TRANSGENERATED
DATA INPUT
CASE NUMBER 481
.2023858E+010 .0 .0 .1264911E+01 .5314811E+00 .4553680E+02 .3048625E+04
.2626129E+00 .7285888E+020 .0 .4665600E+05 .9454063E+010 .0
.3221819E+00 .5901589E+05 .3600000E+02 .8189883E+040 .0 .0 .9442510E+05
0 .0 .0 .4091000E+00
CASE NUMBER 482
.2216529E+010 .0 .0 .1303840E+01 .5820890E+00 .4693826E+02 .3048625E+04
.2626129E+00 .7979504E+020 .0 .4665600E+05 .9454063E+010 .0
.3424053E+00 .6083198E+05 .3600000E+02 .8757365E+040 .0 .0 .1034144E+06
0 .0 .0 .6152000E+00
CASE NUMBER 483
.2414953E+010 .0 .0 .1241641E+01 .6341978E+00 .4828907E+02 .3048625E+04
.2626129E+00 .8693832E+020 .0 .4665600E+05 .9454063E+010 .0
.3523321E+00 .8259559E+05 .3600000E+02 .7362287E+040 .0 .0 .1126721E+06
0 .0 .0 .4216000E+00
CASE NUMBER 484
.2818959E+010 .0 .0 .1378405E+01 .6877750E+00 .4962258E+02 .3048625E+04
.2626129E+00 .9428208E+020 .0 .4665600E+05 .9454063E+010 .0
.3819889E+00 .8431086E+05 .3600000E+02 .7884955E+040 .0 .0 .1221908E+06
0 .0 .0 .4291000E+00
CASE NUMBER 485
.2828427E+010 .0 .0 .1414214E+01 .7427814E+00 .5091169E+02 .3048625E+04
.2626129E+00 .1018234E+020 .0 .4665600E+05 .9454063E+010 .0
.3713907E+00 .8588155E+05 .3600000E+02 .8622814E+040 .0 .0 .1319631E+06
0 .0 .0 .4351000E+00
CASE NUMBER 486
.3779645E+000 .1000000E+030 .0 .0 .0 .0 .3430000E+03
0 .1000000E+050 .0 .4665600E+05 .1380672E+02 .3430000E+07 .3779645E+02
0 .3800000E+020 .0 .0 .3430000E+050
0 .4665600E+07 .2542000E+00
CASE NUMBER 487
.3575534E+00 .3535324E+02 .1000000E+03 .7071068E+02 .7071068E+00 .1336206E+00 .3430000E+03
.3779645E+00 .1272782E+02 .1000000E+05 .3535324E+04 .4665600E+05 .1380672E+02 .3430000E+07 .3779645E+02
.2672612E+00 .3299077E+05 .3600000E+02 .1212888E+03 .1272782E+04 .3430000E+05 .1272782E+06 .1649539E+05
.2545584E+04 .2545584E+06 .4665600E+07 .2680000E+00
CASE NUMBER 488
.1000000E+01 .1000000E+03 .1000000E+03 .1000000E+03 .1000000E+01 .3779645E+00 .3600000E+02 .3430000E+03
.3779645E+00 .3800000E+02 .1000000E+05 .1000000E+05 .4665600E+05 .1380672E+02 .3430000E+07 .3779645E+02
.3779645E+00 .4665600E+05 .3600000E+02 .3430000E+03 .3600000E+04 .3430000E+05 .3600000E+06 .4665600E+05
.3600000E+04 .3600000E+06 .4665600E+07 .2680000E+00

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TRANSGENERATED
DATA INPUT
CASE NUMBER 489
.1837117E+01 .1837117E+03 .1000000E+03 .1224745E+02 .1224745E+01 .8943651E+00 .4409082E+02 .3430000E+03
.3779645E+00 .8813622E+02 .1000000E+05 .1837117E+05 .4665600E+05 .1380672E+02 .3430000E+07 .3779645E+02
.4828100E+00 .3714170E+05 .3600000E+02 .6301212E+03 .6613622E+04 .2420000E+05 .8613622E+06 .8971253E+05
.4409082E+04 .4409082E+06 .4665600E+07 .3036000E+00
CASE NUMBER 490
.2828427E+01 .2828427E+03 .1000000E+03 .1414214E+03 .1414214E+01 .1069045E+01 .5091169E+02 .3430000E+03
.3779645E+00 .1018234E+03 .1000000E+05 .2828427E+05 .4665600E+05 .1380672E+02 .3430000E+07 .3779645E+02
.5245225E+00 .6598155E+05 .3600000E+02 .9701505E+03 .1018234E+05 .3430000E+05 .1018234E+07 .1319631E+06
.5091169E+04 .5091169E+06 .4665600E+07 .3241000E+00
CASE NUMBER 491
.3552847E+01 .3552847E+03 .1000000E+03 .1581138E+03 .1581138E+01 .1494036E+01 .5892100E+02 .3430000E+03
.3779645E+00 .1423025E+03 .1000000E+05 .2952847E+05 .4665600E+05 .1380672E+02 .3430000E+07 .3779645E+02
.5878143E+00 .7378816E+05 .3600000E+02 .1355827E+04 .1423025E+05 .3430000E+05 .1423025E+07 .1844240E+06
.5892100E+04 .5892100E+06 .4665600E+07 .3484000E+00
CASE NUMBER 492
.5196152E+01 .5196152E+03 .1000000E+03 .1732051E+03 .1732051E+01 .1962861E+01 .6235383E+02 .3430000E+03
.3779645E+00 .1870615E+03 .1000000E+05 .5196152E+05 .4665600E+05 .1380672E+02 .3430000E+07 .3779645E+02
.8546337E+00 .8081056E+05 .3600000E+02 .1782280E+04 .1870615E+05 .3430000E+05 .1870615E+07 .2424317E+06
.8235383E+04 .8235383E+06 .4665600E+07 .3727000E+00
CASE NUMBER 493
.8547900E+01 .8547900E+03 .1000000E+03 .1870829E+03 .1870829E+01 .2474874E+01 .6734983E+02 .3430000E+03
.3779645E+00 .2257244E+03 .1000000E+05 .8547900E+05 .4665600E+05 .1380672E+02 .3430000E+07 .3779645E+02
.7071068E+00 .8728328E+05 .3600000E+02 .2245970E+04 .2257244E+05 .3430000E+05 .2257244E+07 .3054988E+06
.6734983E+04 .6734983E+06 .4665600E+07 .4046000E+00
CASE NUMBER 494
.6830520E+01 .6830520E+03 .1000000E+03 .1897367E+03 .1897367E+01 .2581694E+01 .6830520E+02 .3430000E+03
.3779645E+00 .2458987E+03 .1000000E+05 .6830520E+05 .4665600E+05 .1380672E+02 .3430000E+07 .3779645E+02
.7171372E+00 .8852356E+05 .3600000E+02 .2342868E+04 .2458987E+05 .3430000E+05 .2458987E+07 .3186847E+06
.6830520E+04 .6830520E+06 .4665600E+07 .4104000E+00
CASE NUMBER 495
.7117082E+01 .7117082E+03 .1000000E+03 .1923538E+03 .1923538E+01 .2690068E+01 .6824738E+02 .3430000E+03
.3779645E+00 .2582153E+03 .1000000E+05 .7117082E+05 .4665600E+05 .1380672E+02 .3430000E+07 .3779645E+02
.7270282E+00 .8974461E+05 .3600000E+02 .2441183E+04 .2582153E+05 .3430000E+05 .2582153E+07 .3320850E+06
.6824738E+04 .6824738E+06 .4665600E+07 .4166000E+00
CASE NUMBER 496
.7407564E+01 .7407564E+03 .1000000E+03 .1949359E+03 .1949359E+01 .2799796E+01 .7017892E+02 .3430000E+03
.3779645E+00 .2866723E+03 .1000000E+05 .7407564E+05 .4665600E+05 .1380672E+02 .3430000E+07 .3779645E+02
.7287884E+00 .8084929E+05 .3600000E+02 .2540794E+04 .2866723E+05 .3430000E+05 .2866723E+07 .3456073E+06
.7017892E+04 .7017892E+06 .4665600E+07 .4232000E+00

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TRANSGENERATED
DATA INPUT
CASE NUMBER 497
0 0 1000000E-030 0 0 0 0 7290000E-07 7290000E-03
3333333E+00 0 1000000E-050 4665600E+05 1200000E+02 7290000E-07 3333333E+02
0 0 1600000E-020 0 0 0 0 0
0 0 4665600E-07 2623000E+00 0 0 0 0 0
CASE NUMBER 498
3525524E+00 3525524E-02 1000000E+03 7071068E+02 7071068E+00 1178511E+00 2545584E-02 7290000E-03
3333333E+00 1272792E-02 1000000E-05 3535534E+04 4665600E-05 1200000E+02 7290000E-07 3333333E+02
2576232E+00 3299077E-05 3600000E-02 2577404E+03 1272792E-04 7290000E+05 1272792E-06 1649539E-05
2545584E-04 2545584E-06 4665600E-07 2795000E+00 0 0 0 0 0
CASE NUMBER 499
1000000E-01 1000000E-03 1000000E+03 1000000E+01 1000000E+01 3333333E+00 3600000E-02 7290000E-03
3333333E+00 3800000E-02 1000000E-05 1000000E-05 4665600E-05 1200000E+02 7290000E-07 3333333E+02
3333333E+00 4665600E-05 3600000E-02 7290000E-03 3600000E-04 7290000E-05 3600000E-06 4665600E-05
3800000E-04 3800000E-06 4665600E-07 2883000E+00 0 0 0 0 0
CASE NUMBER 500
1837117E+01 1837117E-03 1000000E+03 1224745E+03 1224745E+01 6125724E+00 4409082E-02 7290000E-02
3333333E+00 8613622E-02 1000000E-05 1837117E+05 4665600E-05 1200000E+02 7290000E-07 3333333E+02
4082483E+00 5714170E-05 3600000E-02 1338259E+04 6613622E+04 7290000E+05 6613622E-06 6571255E-05
4409082E-04 4409082E-06 4665600E-07 3197000E+00 0 0 0 0 0
CASE NUMBER 501
2828427E+01 2828427E-03 1000000E+03 1414214E+03 1414214E+01 8426050E+00 5091189E-02 7290000E-03
3333333E+00 1018234E-03 1000000E-05 2828427E+05 4665600E-05 1200000E+02 7290000E-07 3333333E+02
4714045E+00 6589155E-05 3600000E-02 2081823E+04 1018234E+05 7290000E+05 1018234E-07 1319831E-06
5091189E-04 5091189E-06 4665600E-07 3423000E+00 0 0 0 0 0
CASE NUMBER 502
3952847E+01 3952847E-03 1000000E+03 1581139E+03 1581139E+01 1317616E+01 5692100E-02 7290000E-03
3333333E+00 1423025E-03 1000000E-05 3952847E+05 4665600E-05 1200000E+02 7290000E-07 3333333E+02
5091189E+00 7376961E-05 3600000E-02 2881626E+04 1423025E+05 7290000E+05 1423025E-07 1844240E-06
5692100E-04 5692100E-06 4665600E-07 3687000E+00 0 0 0 0 0
CASE NUMBER 503
5186152E+01 5186152E-03 1000000E+03 1732051E+03 1732051E+01 1732051E-01 6225382E-02 7290000E-02
3333333E+00 1870615E-03 1000000E-05 5186152E+05 4665600E-05 1200000E+02 7290000E-07 3333333E+02
5775303E+00 8081056E-06 3600000E-02 3787855E+04 1870615E+05 7290000E+05 1870615E-07 2426317E-06
6225382E-04 6225382E-06 4665600E-07 4008000E+00 0 0 0 0 0
CASE NUMBER 504
5458113E+01 5458113E-03 1000000E+03 1760682E-03 1760682E-01 1819371E+01 6328454E-02 7290000E-03
3333333E+00 1964921E-03 1000000E-05 5458113E+05 4665600E-05 1200000E+02 7290000E-07 3333333E+02
5888939E-06 8214636E-05 3600000E-02 3978965E+04 1964921E-05 7290000E-05 1964921E-07 2546537E-06
6328454E-04 6328454E-06 4665600E-07 4078000E+00 0 0 0 0 0

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TRANSGENERATED
DATA INPUT
CASE NUMBER 505
5724334E+01 5724334E-03 1000000E+03 1788854E+03 1788854E-01 1908111E+01 6439876E-02 7290000E-03
3333333E+00 2060760E-03 1000000E-05 5724334E+05 4665600E-05 1200000E+02 7290000E-07 3333333E+02
5862848E+00 8346079E-05 3600000E-02 4173040E-04 2060760E-05 7290000E+05 2060760E-07 2670745E-06
6439876E-04 6439876E-06 4665600E-07 4152000E+00 0 0 0 0 0
CASE NUMBER 506
0 0 1000000E-030 0 0 0 0 1000000E+04
3162278E+00 0 1000000E-050 4665600E-05 1138420E+02 1000000E-08 3162278E-02
0 0 1600000E-020 0 0 0 0 0
0 0 4665600E-07 2667000E+00 0 0 0 0 0
CASE NUMBER 507
3525524E+00 3525524E-02 1000000E+03 7071068E-02 7071068E+00 1118034E+00 2545584E-02 1000000E+04
3162278E+00 1272792E-02 1000000E-05 3525534E+04 4665600E-05 1138420E+02 1000000E-08 3162278E-02
2236068E+00 3299077E-05 3600000E-02 3535534E+03 1272792E-04 1000000E+06 1272792E-06 1649539E-05
2545584E-04 2545584E-06 4665600E-07 2846000E+00 0 0 0 0 0
CASE NUMBER 508
1000000E-01 1000000E-03 1000000E+03 1000000E+03 1000000E+01 3162278E+00 3600000E-02 1000000E+04
3162278E+00 1600000E-02 1000000E-05 1000000E-05 4665600E-05 1138420E+02 1000000E-08 3162278E-02
3162278E+00 4665600E-05 3600000E-02 1000000E+04 3600000E-04 1000000E+06 3600000E-06 4665600E-05
3800000E-04 3800000E-06 4665600E-07 3053000E+00 0 0 0 0 0
CASE NUMBER 509
1837117E+01 1837117E-03 1000000E+03 1224745E+03 1224745E+01 5609475E+00 4409082E-02 1000000E+04
3162278E+00 8613622E-02 1000000E-05 1837117E+05 4665600E-05 1138420E+02 1000000E-08 3162278E-02
3872983E+00 5714170E-05 3600000E-02 1837117E+04 6613622E+04 1000000E+06 6613622E-06 6571255E-05
4409082E-04 4409082E-06 4665600E-07 3274000E+00 0 0 0 0 0
CASE NUMBER 510
2828427E+01 2828427E-03 1000000E+03 1414214E+03 1414214E-01 844272E+00 5091189E-02 1000000E+04
3162278E+00 1018234E-03 1000000E-05 2828427E+05 4665600E-05 1138420E+02 1000000E-08 3162278E-02
4472136E+00 6589155E-05 3600000E-02 2828427E+04 1018234E+05 1000000E+06 1018234E-07 1319831E-06
5091189E-04 5091189E-06 4665600E-07 3515000E+00 0 0 0 0 0
CASE NUMBER 511
3952847E+01 3952847E-03 1000000E+03 1581139E+03 1581139E+01 1250000E+01 5692100E-02 1000000E+04
3162278E+00 1423025E-03 1000000E-05 3952847E+05 4665600E-05 1138420E+02 1000000E-08 3162278E-02
5091189E+00 7376961E-05 3600000E-02 2881626E+04 1423025E+05 1000000E+06 1423025E-07 1844240E-06
5692100E-04 5692100E-06 4665600E-07 3807000E+00 0 0 0 0 0
CASE NUMBER 512
4192374E+01 4192374E-03 1000000E+03 1812452E+03 1812452E-01 1325745E+01 5604826E-02 1000000E+04
3162278E+00 1509255E-03 1000000E-05 4192374E+05 4665600E-05 1138420E+02 1000000E-08 3162278E-02
5099020E+00 7523054E-05 3600000E-02 4192374E+04 1509255E+05 1000000E+06 1509255E-07 1855844E-06
5099020E-04 5099020E-06 4665600E-07 3885000E+00 0 0 0 0 0

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DATA INPUT
CASE NUMBER 513
.4438553E-01 .4438553E-03 1000000E-03 .1643168E-03 .1643168E-01 .1402961E-01 .5915404E-02 1000000E-04
3182278E-00 .1597159E-02 1000000E-05 .4438553E-05 .4665600E-05 .1138420E-02 1000000E-08 .3182278E-02
5196152E-00 .7660363E-08 3600000E-02 .4438553E-04 .1597159E-08 .1000000E-08 .1597159E-07 .2089918E-08
5915404E-04 .5915404E-06 .4665600E-07 .3931000E-00
CASE NUMBER 514
.4685298E-01 .4685298E-03 1000000E-03 .1673320E-03 .1673320E-01 .1481821E-01 .6023952E-02 1000000E-04
3182278E-00 .1686707E-03 1000000E-05 .4685298E-05 .4665600E-05 .1138420E-02 1000000E-08 .3182278E-02
5291503E-00 .7807042E-05 3600000E-02 .4685298E-04 .1686707E-05 .1000000E-08 .1686707E-07 .2185972E-06
6023952E-04 .6023952E-06 .4665600E-07 .4000000E-00
CASE NUMBER 515
0. 0. 1000000E-030. 0. 0. 0. 0. 1728000E-04
2886751E-000. 1000000E-050. 0. 4665600E-05 .1039230E-02 .1728000E-08 .2886751E-02
0. 0. 3600000E-020. 0. 0. 0. 0.
0. 0. 4665600E-07 .2754000E-00
CASE NUMBER 516
.2535534E-00 .2535534E-02 1000000E-03 .7071088E-02 .7071088E-00 .1020521E-00 .2545584E-02 .1728000E-04
2886751E-00 .1272792E-02 1000000E-05 .2535534E-04 .4665600E-05 .1039230E-02 .1728000E-08 .2886751E-02
2041241E-00 .3299077E-05 3600000E-02 .6109403E-03 .1272792E-04 .1728000E-08 .1272792E-06 .1649539E-05
2545584E-04 .2545584E-06 .4665600E-07 .2953000E-00
CASE NUMBER 517
1000000E-01 1000000E-03 1000000E-03 1000000E-03 1000000E-01 .2886751E-00 3600000E-02 .1728000E-04
2886751E-00 3600000E-02 1000000E-05 1000000E-05 .4665600E-05 .1039230E-02 .1728000E-08 .2886751E-02
2886751E-00 .4665600E-05 3600000E-02 .1728000E-04 3600000E-04 .1728000E-08 3600000E-06 .4665600E-05
3600000E-04 3600000E-06 .4665600E-07 .3191000E-00
CASE NUMBER 518
1837117E-01 .1837117E-03 1000000E-03 .1224745E-03 .1224745E-01 .8203201E-00 .4409082E-02 .1728000E-04
2886751E-00 .6613622E-02 1000000E-05 .1837117E-05 .4665600E-05 .1039230E-02 .1728000E-08 .2886751E-02
3535534E-00 .5714170E-05 3600000E-02 .1745298E-04 .6613622E-04 .1728000E-08 .6613622E-06 .8571255E-05
4409082E-04 .4409082E-06 .4665600E-07 .3428000E-00
CASE NUMBER 519
.2628427E-01 .2628427E-03 1000000E-03 .1414214E-02 .1414214E-01 .8164966E-00 .5091169E-02 .1728000E-04
2886751E-00 .1018234E-03 1000000E-05 .2828427E-05 .4665600E-05 .1039230E-02 .1728000E-08 .2886751E-02
4082483E-00 .6599155E-05 3600000E-02 .4887522E-04 .1018234E-05 .1728000E-08 .1018234E-07 .1319631E-06
5091169E-04 .5091169E-06 .4665600E-07 .3704000E-00
CASE NUMBER 520
3043189E-01 .3043189E-03 1000000E-03 .1448138E-03 .1448138E-01 .8784930E-00 .5216886E-02 .1728000E-04
2886751E-00 .1095548E-03 1000000E-05 .3043189E-05 .4665600E-05 .1039230E-02 .1728000E-08 .2886751E-02
4183300E-00 .6761097E-05 3600000E-02 .5258631E-04 .1095548E-05 .1728000E-08 .1095548E-07 .1419830E-06
5216886E-04 .5216886E-06 .4665600E-07 .3764000E-00

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TRANSGENERATED
DATA INPUT
CASE NUMBER 521
.3263127E-01 .3263127E-03 1000000E-03 .1483240E-03 .1483240E-01 .8203201E-00 .5338663E-02 .1728000E-04
2886751E-00 .1174726E-03 1000000E-05 .3263127E-05 .4665600E-05 .1039230E-02 .1728000E-08 .2886751E-02
4281744E-00 .6920203E-05 3600000E-02 .5638684E-04 .1174726E-05 .1728000E-08 .1174726E-07 .1522445E-06
5338663E-04 .5338663E-06 .4665600E-07 .3826000E-00
CASE NUMBER 522
3488123E-01 .3488123E-03 1000000E-03 .1516575E-03 .1516575E-01 .1008934E-01 .5459670E-02 .1728000E-04
2886751E-00 .1255724E-03 1000000E-05 .3488123E-05 .4665600E-05 .1039230E-02 .1728000E-08 .2886751E-02
4377975E-00 .7057733E-05 3600000E-02 .6027476E-04 .1255724E-05 .1728000E-08 .1255724E-07 .1627419E-06
5459670E-04 .5459670E-06 .4665600E-07 .3891000E-00
CASE NUMBER 523
0. 0. 1000000E-030. 0. 0. 0. 0. 3048625E-04
2626129E-000. 1000000E-050. 0. 4665600E-05 .8454063E-01 .3048625E-08 .2626129E-02
0. 0. 3600000E-020. 0. 0. 0. 0.
0. 0. 4665600E-07 .2868000E-00
CASE NUMBER 524
.3525534E-00 .3525534E-02 1000000E-03 .7071088E-02 .7071088E-00 .3284787E-01 .2545584E-02 .3048625E-04
2626129E-00 .1272792E-02 1000000E-05 .2535534E-04 .4665600E-05 .8454063E-01 .3048625E-08 .2626129E-02
1856953E-00 .3299077E-05 3600000E-02 .1077952E-04 .1272792E-04 .3048625E-08 .1272792E-06 .1649539E-05
2545584E-04 .2545584E-06 .4665600E-07 .2096000E-00
CASE NUMBER 525
1000000E-01 1000000E-03 1000000E-03 1000000E-03 1000000E-01 .2626129E-00 3600000E-02 .3048625E-04
2626129E-00 3600000E-02 1000000E-05 1000000E-05 .4665600E-05 .8454063E-01 .3048625E-08 .2626129E-02
2626129E-00 .4665600E-05 3600000E-02 .3048625E-04 3600000E-04 .3048625E-08 3600000E-06 .4665600E-05
3600000E-04 3600000E-06 .4665600E-07 .3356000E-00
CASE NUMBER 526
1837117E-01 .1837117E-03 1000000E-03 .1224745E-03 .1224745E-01 .8203201E-00 .4409082E-02 .3048625E-04
2626129E-00 .6613622E-02 1000000E-05 .1837117E-05 .4665600E-05 .8454063E-01 .3048625E-08 .2626129E-02
3218238E-00 .5714170E-05 3600000E-02 .5800882E-04 .6613622E-04 .3048625E-08 .6613622E-06 .8571255E-05
4409082E-04 .4409082E-06 .4665600E-07 .3299000E-00
CASE NUMBER 527
2022858E-01 .2022858E-03 1000000E-03 .1264811E-03 .1264811E-01 .5314811E-00 .4553680E-02 .3048625E-04
2626129E-00 .7285888E-02 1000000E-05 .2022858E-05 .4665600E-05 .8454063E-01 .3048625E-08 .2626129E-02
3321819E-00 .5901589E-05 3600000E-02 .6169982E-04 .7285888E-04 .3048625E-08 .7285888E-06 .9442510E-05
4553680E-04 .4553680E-06 .4665600E-07 .3888000E-00
CASE NUMBER 528
0. 0. 2000000E-030. 0. 0. 0. 0. 3430000E-02
3779845E-000. 4000000E-050. 0. 4665600E-05 .1360672E-02 .1372000E-08 .7559289E-02
0. 0. 3600000E-020. 0. 0. 0. 0.
0. 0. 4665600E-07 .2383000E-00

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DATA INPUT

CASE NUMBER	529	GROUP NUMBER	2
.3535534E+00	.7071068E+02	.2000000E+03	.1414214E+03
.3779645E+00	.1272792E+02	.4000000E+05	.1414214E+05
.2672612E+00	.3299077E+05	.3600000E+02	.1212688E+03
.5091169E+04	.1018234E+07	.9331200E+07	.2471000E+00
.1000000E+01	.2000000E+03	.2000000E+03	.2000000E+03
.3779645E+00	.3600000E+02	.4000000E+05	.4000000E+05
.3779645E+00	.4665600E+05	.3600000E+02	.3430000E+03
.7200000E+04	.1440000E+07	.9331200E+07	.2622000E+00
.1837117E+01	.3674235E+03	.2000000E+03	.2449490E+03
.3779645E+00	.6613622E+02	.4000000E+05	.7348468E+05
.4629100E+00	.5714170E+05	.3600000E+02	.8301312E+03
.8818182E+04	.1763633E+07	.9331200E+07	.2788000E+00
.2828427E+01	.5656854E+03	.2000000E+03	.2828427E+03
.3779645E+00	.1018234E+03	.4000000E+05	.1131371E+06
.5345225E+00	.8598155E+05	.3600000E+02	.9701503E+03
.1018234E+05	.2036468E+07	.9331200E+07	.2973000E+00
.3952847E+01	.7905694E+03	.2000000E+03	.3162278E+03
.3779645E+00	.1423025E+03	.4000000E+05	.1581139E+06
.5976142E+00	.7376861E+05	.3600000E+02	.1355827E+04
.1138420E+05	.2276840E+07	.9331200E+07	.3187000E+00
.5196152E+01	.1038230E+04	.2000000E+03	.3464102E+03
.3779645E+00	.1870815E+03	.4000000E+05	.2078461E+06
.6546537E+00	.8081058E+05	.3600000E+02	.1782280E+04
.1247077E+05	.2494153E+07	.9331200E+07	.2438000E+00
.6547900E+01	.1309580E+04	.2000000E+03	.3741657E+03
.3779645E+00	.2357244E+03	.4000000E+05	.2619140E+06
.4082483E+00	.5714170E+05	.3600000E+02	.2458300E+04
.1346897E+05	.2689393E+07	.9331200E+07	.3733000E+00
.6830520E+01	.1366104E+04	.2000000E+03	.3794733E+03
.3779645E+00	.2458987E+03	.4000000E+05	.2732208E+06
.7171372E+00	.8852354E+05	.3600000E+02	.2342868E+04
.1266104E+05	.2732208E+07	.9331200E+07	.3787000E+00

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TRANSGENERATED

DATA INPUT

CASE NUMBER	537	GROUP NUMBER	2
0	0	.2000000E+03	0
.3333333E+00	0	.4000000E+05	0
0	0	.3600000E+02	0
0	0	.9331200E+07	0
.3535534E+00	.7071068E+02	.2000000E+03	.1414214E+03
.3333333E+00	.1272792E+02	.4000000E+05	.1414214E+05
.2357023E+00	.3299077E+05	.3600000E+02	.2577404E+03
.5091169E+04	.1018234E+07	.9331200E+07	.2471000E+00
.1000000E+01	.2000000E+03	.2000000E+03	.2000000E+03
.3333333E+00	.3600000E+02	.4000000E+05	.4000000E+05
.3333333E+00	.4665600E+05	.3600000E+02	.7290000E+03
.7200000E+04	.1440000E+07	.9331200E+07	.2743000E+00
.1837117E+01	.3674235E+03	.2000000E+03	.2449490E+03
.3333333E+00	.6613622E+02	.4000000E+05	.7348468E+05
.4082483E+00	.5714170E+05	.3600000E+02	.1339259E+04
.8818182E+04	.1763633E+07	.9331200E+07	.2939000E+00
.2828427E+01	.5656854E+03	.2000000E+03	.2828427E+03
.3333333E+00	.1018234E+03	.4000000E+05	.1131371E+06
.4714045E+00	.8598155E+05	.3600000E+02	.2061923E+04
.1018234E+05	.2036468E+07	.9331200E+07	.3185000E+00
.3952847E+01	.7905694E+03	.2000000E+03	.3162278E+03
.3333333E+00	.1423025E+03	.4000000E+05	.1581139E+06
.5976142E+00	.7376861E+05	.3600000E+02	.1329259E+04
.1138420E+05	.2276840E+07	.9331200E+07	.3410000E+00
.4192374E+01	.8384748E+03	.2000000E+03	.3224903E+03
.3333333E+00	.1509255E+03	.4000000E+05	.1678750E+06
.5374838E+00	.7523054E+05	.3600000E+02	.3056241E+04
.1160965E+05	.2221920E+07	.9331200E+07	.3464000E+00
.4436553E+01	.8873105E+03	.2000000E+03	.3286335E+03
.3333333E+00	.1587158E+03	.4000000E+05	.1774215E+06
.5677220E+00	.7666362E+05	.3600000E+02	.3234747E+04
.1183081E+05	.2386181E+07	.9331200E+07	.3519000E+00

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TRANSGENERATED
DATA INPUT
CASE NUMBER 545                                GROUP NUMBER 2
.4685296E+01 .9370592E+03 2000000E+03 .3346640E+03 .1673320E+01 .1561765E+01 .6023952E+02 .7290000E+03
.3333333E+00 .1686707E+03 4000000E+05 .1874118E+04 .4665600E+05 .1200000E+02 .2816000E+08 .6666667E+02
.5577734E+00 .7807042E+05 3600000E+02 .2415581E+04 .3273413E+05 .1458000E+06 .6744826E+07 .2185972E+06
.1204780E+05 .2409581E+07 .9331200E+07 .3577000E+00
CASE NUMBER 546                                GROUP NUMBER 2
.4938522E+01 .9877044E+03 2000000E+03 .3405877E+03 .1702939E+01 .1646174E+01 .6130579E+02 .7290000E+03
.3333333E+00 .1777888E+03 4000000E+05 .1975409E+04 .4665600E+05 .1200000E+02 .2916000E+08 .6666667E+02
.6878622E+00 .7845231E+05 3600000E+02 .2600131E+04 .3555736E+05 .1458000E+06 .7111472E+07 .2304117E+06
.2261161E+05 .2452232E+07 .9331200E+07 .3638000E+00
CASE NUMBER 547                                GROUP NUMBER 2
0. 0. 2000000E+030. 0. 0. 0. 10000000E+04
.3162278E+000. 4000000E+050. .4665600E+05 .1338420E+02 4000000E+08 .6324555E+02
0. 0. 3600000E+020. 0. 2000000E+060. 0.
0. 0. .9331200E+07 .2479000E+00
CASE NUMBER 548                                GROUP NUMBER 2
.3535334E+00 .7071068E+02 2000000E+03 .1414214E+03 .7071068E+00 .1118034E+00 .2545384E+02 .1000000E+04
.3162278E+00 .1272792E+02 4000000E+05 .1414214E+03 .4665600E+05 .1338420E+02 .4000000E+08 .6324555E+02
.2236080E+00 .2299977E+05 3600000E+02 .2325534E+03 .2545384E+04 .2000000E+06 .5091189E+06 .1648339E+05
.5091189E+04 .1018234E+07 .9331200E+07 .2825000E+00
CASE NUMBER 549                                GROUP NUMBER 2
.1000000E+01 .2000000E+03 2000000E+03 .2000000E+03 .1000000E+01 .3162278E+00 .3600000E+02 .1000000E+04
.3162278E+00 .3600000E+02 4000000E+05 .4000000E+05 .4665600E+05 .1338420E+02 4000000E+08 .6324555E+02
.3162278E+00 .4665600E+05 3600000E+02 .1000000E+04 .7200000E+04 .2000000E+06 .1440000E+07 .4665600E+05
.7200000E+04 .1440000E+07 .9331200E+07 .2803000E+00
CASE NUMBER 550                                GROUP NUMBER 2
.1837117E+01 .3674235E+03 2000000E+03 .2449490E+03 .1224745E+01 .5699475E+00 .4408082E+02 .1000000E+04
.3162278E+00 .8612622E+02 4000000E+05 .7548499E+05 .4665600E+05 .1338420E+02 4000000E+08 .6324555E+02
.3872833E+00 .5714170E+05 3600000E+02 .1827119E+04 .1322724E+05 .3456000E+06 .2645449E+07 .8571255E+05
.8818163E+04 .1763633E+07 .9331200E+07 .3018000E+00
CASE NUMBER 551                                GROUP NUMBER 2
.2828427E+01 .5656854E+03 2000000E+03 .2828427E+03 .1414214E+01 .8944272E+00 .5091189E+02 .1000000E+04
.3162278E+00 .7018234E+03 4000000E+05 .1131371E+04 .4665600E+05 .1338420E+02 4000000E+08 .6324555E+02
.4472136E+00 .6598155E+05 3600000E+02 .2828427E+04 .2038468E+05 .2000000E+06 .4072935E+07 .1319631E+06
.1018234E+05 .2038468E+07 .9331200E+07 .3254000E+00
CASE NUMBER 552                                GROUP NUMBER 2
.3932847E+01 .7865694E+03 2000000E+03 .3162278E+02 .1581139E+01 .7250000E+01 .5692100E+02 .1000000E+04
.3162278E+00 .1423925E+03 4000000E+05 .1581139E+04 .4665600E+05 .1338420E+02 4000000E+08 .6324555E+02
.5000000E+00 .7378961E+05 3600000E+02 .3932847E+04 .2846050E+05 .2000000E+06 .5692100E+07 .1844200E+06
.1138420E+05 .2278800E+07 .9331200E+07 .3517000E+00

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TRANSGENERATED
DATA INPUT
CASE NUMBER 553                                GROUP NUMBER 2
.4192274E+01 .8384748E+03 2000000E+03 .3224903E+03 .1612452E+01 .1325745E+01 .5804826E+02 .1000000E+04
.3162278E+00 .1509255E+03 4000000E+05 .1876930E+04 .4665600E+05 .1338420E+02 4000000E+08 .6324555E+02
.5090870E+00 .7423905E+05 3600000E+02 .3018509E+05 .2000000E+06 .6037019E+07 .1955994E+06
.1160985E+05 .2321930E+07 .9331200E+07 .3575000E+00
CASE NUMBER 554                                GROUP NUMBER 2
0. 0. 2000000E+030. 0. 0. 0. 1728000E+04
.2886751E+000. 4000000E+050. .4665600E+05 .1039230E+02 6912000E+08 .5773503E+02
0. 0. 3600000E+020. 0. 3456000E+060. 0.
0. 0. .9331200E+07 .2544000E+00
CASE NUMBER 555                                GROUP NUMBER 2
.3535334E+00 .7071068E+02 2000000E+03 .1414214E+03 .7071068E+00 .1020821E+00 .2545384E+02 .1728000E+04
.2886751E+00 .1272792E+02 4000000E+05 .1414214E+03 .4665600E+05 .1039230E+02 .6912000E+08 .5773503E+02
.2081241E+00 .2299977E+05 3600000E+02 .6108403E+03 .2545384E+04 .3456000E+06 .5091189E+06 .1648339E+05
.5091189E+04 .1018234E+07 .9331200E+07 .2726000E+00
CASE NUMBER 556                                GROUP NUMBER 2
.1000000E+01 .2000000E+03 2000000E+03 .2000000E+03 .1000000E+01 .2886751E+00 .3600000E+02 .1728000E+04
.2886751E+00 .3600000E+02 4000000E+05 .4000000E+05 .4665600E+05 .1039230E+02 6912000E+08 .5773503E+02
.2886751E+00 .4665600E+05 3600000E+02 .1728000E+04 .7200000E+04 .3456000E+06 .1440000E+07 .4665600E+05
.7200000E+04 .1440000E+07 .9331200E+07 .2943000E+00
CASE NUMBER 557                                GROUP NUMBER 2
.1837117E+01 .3674235E+03 2000000E+03 .2449490E+03 .1224745E+01 .5303301E+00 .4408082E+02 .1728000E+04
.2886751E+00 .8612622E+02 4000000E+05 .7548499E+05 .4665600E+05 .1039230E+02 6912000E+08 .5773503E+02
.3535334E+00 .5714170E+05 3600000E+02 .1765212E+04 .1322724E+05 .3456000E+06 .2645449E+07 .8571255E+05
.8818163E+04 .1763633E+07 .9331200E+07 .3178000E+00
CASE NUMBER 558                                GROUP NUMBER 2
.2023058E+01 .4047116E+03 2000000E+03 .2529822E+03 .1264811E+01 .5842374E+00 .4552480E+02 .1728000E+04
.2886751E+00 .7285288E+02 4000000E+05 .8095431E+05 .4665600E+05 .1039230E+02 6912000E+08 .5773503E+02
.3651484E+00 .5801569E+05 3600000E+02 .3487220E+04 .1451718E+05 .3456000E+06 .2914355E+07 .8442510E+05
.9107300E+04 .1821472E+07 .9331200E+07 .2277000E+00
CASE NUMBER 559                                GROUP NUMBER 2
.2118519E+01 .4230589E+03 2000000E+03 .2607681E+03 .1303846E+01 .8298548E+00 .4693828E+02 .1728000E+04
.2886751E+00 .8612622E+02 4000000E+05 .861113E+04 .4665600E+05 .1039230E+02 6912000E+08 .5773503E+02
.3743833E+00 .6083190E+05 3600000E+02 .3338162E+04 .1505901E+05 .3456000E+06 .3191801E+07 .1034144E+06
.8387451E+04 .1877530E+07 .9331200E+07 .3278000E+00
CASE NUMBER 560                                GROUP NUMBER 2
.2414953E+01 .4829907E+03 2000000E+03 .2683262E+03 .1241841E+01 .8971370E+00 .4829907E+02 .1728000E+04
.2886751E+00 .8693832E+02 4000000E+05 .8693814E+05 .4665600E+05 .1039230E+02 6912000E+08 .5773503E+02
.3872993E+00 .6258559E+05 3600000E+02 .4173040E+04 .1728786E+05 .3456000E+06 .3477532E+07 .1128721E+06
.8693814E+04 .1821962E+07 .9331200E+07 .3328000E+00

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TRANSGENERATED
DATA INPUT

CASE NUMBER 561			GROUP NUMBER 2
2018969E+01	5237939E+03	2000000E+03	2756810E+03
2886751E+00	9428289E+02	4000000E+05	1047368E+06
3979112E+00	6431086E+05	3000000E+02	4525378E+04
8924515E+04	1984903E+07	9331200E+07	3379000E+00
CASE NUMBER 562			GROUP NUMBER 2
2828427E+01	5658854E+03	2000000E+03	2828427E+03
2886751E+00	1018224E+03	4000000E+05	1131371E+06
4082483E+00	3588155E+05	3000000E+02	4887522E+04
1018234E+05	2036468E+07	9331200E+07	3432000E+00
CASE NUMBER 563			GROUP NUMBER 2
0.	0.	2000000E+030	0.
2826129E+00	0.	4000000E+050	0.
0.	0.	3000000E+020	0.
0.	0.	9331200E+07	2875000E+00
CASE NUMBER 564			GROUP NUMBER 2
2535532E+00	7071068E+02	2000000E+03	1414214E+03
2626129E+00	1272792E+02	4000000E+05	1414214E+05
1658652E+00	3289077E+05	3000000E+02	1077852E+04
5061169E+04	1018234E+07	9331200E+07	3115000E+00
CASE NUMBER 565			GROUP NUMBER 2
1000000E+01	2000000E+03	2000000E+03	2000000E+02
2626129E+00	3000000E+02	4000000E+05	4000000E+05
2826129E+00	4883800E+05	3000000E+02	3948825E+04
7200000E+04	1440000E+07	9331200E+07	3115000E+00
CASE NUMBER 566			GROUP NUMBER 2
1153690E+01	2307378E+03	2000000E+03	2087618E+03
2626129E+00	4153263E+02	4000000E+05	4614759E+05
2754307E+00	4883323E+05	3000000E+02	3517167E+04
7551424E+04	1510285E+07	9331200E+07	3162000E+00
CASE NUMBER 567			GROUP NUMBER 2
1314534E+01	2629068E+03	2000000E+03	2190890E+03
2626129E+00	4722223E+02	4000000E+05	5258137E+05
2878780E+00	5110869E+05	3000000E+02	4807522E+04
7887205E+04	1577441E+07	9331200E+07	3211000E+00
CASE NUMBER 568			GROUP NUMBER 2
1482228E+01	2984456E+03	2000000E+03	2280351E+03
2626129E+00	5336021E+02	4000000E+05	5829872E+05
2994247E+00	5319602E+05	3000000E+02	4518757E+04
8209262E+04	1641853E+07	9331200E+07	3260000E+00

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TRANSGENERATED
DATA INPUT

CASE NUMBER 569			GROUP NUMBER 1
0.	0.	5000000E+020	0.
3779445E+000	0.	2500000E+040	0.
0.	0.	1800000E+020	0.
0.	0.	2916000E+06	3156000E+00
CASE NUMBER 570			GROUP NUMBER 1
3886559E+00	1993290E+02	5000000E+02	3679900E+02
3779445E+00	7175808E+01	2500000E+04	9988398E+03
2811743E+00	4282388E+04	1800000E+02	1387380E+03
8623821E+03	3211910E+05	2916000E+06	3465000E+00
CASE NUMBER 571			GROUP NUMBER 1
1054047E+01	1270235E+02	5000000E+02	5088502E+02
3779445E+00	1897285E+02	2500000E+04	2625117E+04
3846549E+00	5935229E+04	1800000E+02	2615381E+03
8159304E+03	4578652E+05	2916000E+06	3750000E+00
CASE NUMBER 572			GROUP NUMBER 1
1827117E+01	3185587E+02	5000000E+02	6123724E+02
3779445E+00	2308811E+02	2500000E+04	4592783E+04
4829180E+00	7142712E+04	1800000E+02	6301312E+03
1102270E+04	5511352E+05	2916000E+06	3965000E+00
CASE NUMBER 573			GROUP NUMBER 1
2828427E+01	1414214E+03	5000000E+02	7071068E+02
3779445E+00	5091169E+02	2500000E+04	7071068E+04
5345225E+00	4247882E+04	1800000E+02	9701505E+03
1272792E+04	6363981E+05	2916000E+06	4116000E+00
CASE NUMBER 574			GROUP NUMBER 1
3852847E+01	1978024E+03	5000000E+02	7805894E+02
3779445E+00	7115125E+02	2500000E+04	9882118E+04
5876183E+00	8221202E+04	1800000E+02	1355827E+04
1423025E+04	7115125E+05	2916000E+06	4374000E+00
CASE NUMBER 575			GROUP NUMBER 1
5196152E+01	2580078E+03	5000000E+02	6660254E+02
3779445E+00	3353074E+02	2500000E+04	1299038E+05
6546837E+00	1010132E+05	1800000E+02	1782280E+04
1558848E+04	7794228E+05	2916000E+06	4734000E+00
CASE NUMBER 576			GROUP NUMBER 1
8567900E+01	2773950E+03	5000000E+02	9354143E+02
3779445E+00	1178622E+02	2500000E+04	1826875E+05
7071068E+00	1001067E+05	1800000E+02	2249330E+04
1603748E+04	8418729E+05	2916000E+06	5211000E+00

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TRANSGENERATED
DATA INPUT
CASE NUMBER 577          GROUP NUMBER 1
1000000E+01  8000000E+03  5000000E+02  1000000E+03  2000000E+01  3023718E+01  3600000E+02  3430000E+03
3778645E+00  1400000E+03  2500000E+04  2000000E+05  5822000E+04  8003261E+01  8575000E+06  1889822E+02
753228E+00  118400E+05  1800000E+02  274000E+04  7200000E+04  1715000E+05  3600000E+06  4665600E+05
1800000E+04  8000000E+05  2916000E+06  5474000E+00

CASE NUMBER 578          GROUP NUMBER 1
8301867E+01  4150934E+03  5000000E+02  1012423E+03  2024846E+01  3137811E+01  3644722E+02  3430000E+03
3778645E+00  1494336E+03  2500000E+04  2075467E+05  5822000E+04  8003261E+01  8575000E+06  1889822E+02
7852197E+00  1180890E+05  1800000E+02  2847540E+04  7471681E+04  1715000E+05  3735840E+06  4841648E+05
1822381E+04  9111806E+05  2916000E+06  5496000E+00

CASE NUMBER 579          GROUP NUMBER 1
8607429E+01  8203719E+03  5000000E+02  1024685E+03  2049390E+01  3253208E+01  3688902E+02  3430000E+03
3778645E+00  549239E+03  2500000E+04  2151840E+05  5822000E+04  8003261E+01  8575000E+06  1889822E+02
7745867E+00  1195204E+05  1800000E+02  2952351E+04  7746895E+04  1715000E+05  3873247E+06  5019858E+05
1844451E+04  9222256E+05  2916000E+06  5502000E+00

CASE NUMBER 580          GROUP NUMBER 1
8916670E+01  4458335E+03  5000000E+02  1036822E+03  2073644E+01  3370184E+01  3732558E+02  3430000E+03
3778645E+00  1805001E+03  2500000E+04  2228167E+05  5822000E+04  8003261E+01  8575000E+06  1889822E+02
7837838E+00  1299349E+05  1800000E+02  3058418E+04  8025003E+04  1715000E+05  4012501E+06  5200202E+05
1868280E+04  9321399E+05  2916000E+06  5505000E+00

CASE NUMBER 581          GROUP NUMBER 1
928918E+01  4614758E+03  5000000E+02  1048809E+03  2097818E+01  3489420E+01  3775712E+02  3430000E+03
3778645E+00  1661313E+03  2500000E+04  2307378E+05  5822000E+04  8003261E+01  8575000E+06  1889822E+02
7928250E+00  1223331E+05  1800000E+02  3165725E+04  8206566E+04  1715000E+05  4152283E+06  5326555E+05
1887856E+04  9429280E+05  2916000E+06  5542000E+00

CASE NUMBER 582          GROUP NUMBER 1
9545942E+01  4772971E+03  5000000E+02  1060860E+03  2121320E+01  3608027E+01  3818377E+02  3430000E+03
3778645E+00  1718269E+03  2500000E+04  2384483E+05  5822000E+04  8003261E+01  8575000E+06  1889822E+02
8017837E+00  1237154E+05  1800000E+02  3274258E+04  8591347E+04  1715000E+05  4295674E+06  5567193E+05
180818E+04  958542E+05  2916000E+06  5598000E+00

CASE NUMBER 583          GROUP NUMBER 1
0 0 0 0 0 0 0 0
333333E+00  1800000E+02  2500000E+04  2500000E+04  5822000E+04  8000000E+01  1822500E+07  166667E+02
0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0
2916000E+06  3165000E+00

CASE NUMBER 584          GROUP NUMBER 1
3535534E+00  1767787E+02  5000000E+02  3535534E+02  7071068E+00  1178511E+00  1272792E+02  7290000E+03
333333E+00  6363861E+01  2500000E+04  8828835E+03  5822000E+04  8000000E+01  1822500E+07  166667E+02
2257023E+00  4123847E+04  1800000E+02  2577404E+03  3181981E+03  3645000E+05  1590990E+05  2061923E+04
6383981E+03  3181981E+05  2916000E+06  3504000E+00
    
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TRANSGENERATED
DATA INPUT
CASE NUMBER 585          GROUP NUMBER 1
1000000E+01  8000000E+02  5000000E+02  5000000E+02  1000000E+01  333333E+00  1800000E+02  7290000E+03
333333E+00  1800000E+02  2500000E+04  2500000E+04  5822000E+04  8000000E+01  1822500E+07  166667E+02
333333E+00  5822000E+04  1800000E+02  7290000E+03  9000000E+03  3645000E+05  4500000E+05  5822000E+04
9000000E+03  4500000E+05  2916000E+06  3818000E+00

CASE NUMBER 586          GROUP NUMBER 1
827117E+01  8185587E+02  5000000E+02  6132724E+02  1224745E+01  6122724E+00  2204541E+02  7290000E+03
333333E+00  3304811E+02  2500000E+04  4582792E+04  5822000E+04  8000000E+01  1822500E+07  166667E+02
4082483E+00  7142712E+04  1800000E+02  1338258E+04  1653406E+04  3645000E+05  8267028E+05  1071407E+05
1102270E+04  3511352E+05  2916000E+06  4050000E+00

CASE NUMBER 587          GROUP NUMBER 1
2828427E+01  1414214E+03  5000000E+02  7071068E+02  1414214E+01  9428090E+00  2545584E+02  7290000E+02
333333E+00  5091189E+02  2500000E+04  7071068E+04  5822000E+04  8000000E+01  1822500E+07  166667E+02
4714045E+00  8247653E+04  1800000E+02  2081823E+04  2545584E+04  3645000E+05  1272792E+02  1649538E+05
1272792E+04  8363981E+05  2916000E+06  4256000E+00

CASE NUMBER 588          GROUP NUMBER 1
3852847E+01  1876424E+03  5000000E+02  7905894E+02  1581139E+01  1317618E+01  2844050E+02  7290000E+03
333333E+00  7115125E+02  2500000E+04  8882118E+04  5822000E+04  8000000E+01  1822500E+07  166667E+02
5270463E+00  8221202E+04  1800000E+02  2881826E+04  3557562E+04  3645000E+05  1778781E+06  2305300E+05
1423025E+04  7115125E+05  2916000E+06  4701000E+00

CASE NUMBER 589          GROUP NUMBER 1
5198152E+01  2598076E+03  5000000E+02  8660254E+02  1732051E+01  1732051E+01  3117681E+02  7290000E+02
333333E+00  8353074E+02  2500000E+04  1299038E+05  5822000E+04  8000000E+01  1822500E+07  166667E+02
5773503E+00  1010132E+05  1800000E+02  3787995E+04  4674537E+04  3645000E+05  238289E+06  3030296E+05
158888E+04  7794229E+05  2916000E+06  5100000E+00

CASE NUMBER 590          GROUP NUMBER 1
8547900E+01  3273950E+03  5000000E+02  9354143E+02  1870829E+01  2182433E+01  2367482E+02  7290000E+03
333333E+00  1176622E+02  2500000E+04  1828975E+05  5822000E+04  8000000E+01  1822500E+07  166667E+02
8236998E+00  1091067E+05  1800000E+02  4773419E+04  5893110E+04  3645000E+05  2948555E+06  3818726E+05
1683748E+04  8418728E+05  2916000E+06  5482000E+00

CASE NUMBER 591          GROUP NUMBER 1
8820520E+01  3415280E+03  5000000E+02  9486833E+02  1897367E+01  2276840E+01  3415260E+02  7290000E+03
333333E+00  1229494E+02  2500000E+04  1707830E+05  5822000E+04  8000000E+01  1822500E+07  166667E+02
8324555E+00  1108544E+05  1800000E+02  4970449E+04  6147468E+04  3645000E+05  3072734E+06  3982558E+05
1707830E+04  8938150E+05  2916000E+06  5495000E+00

CASE NUMBER 592          GROUP NUMBER 1
717097E+01  3585846E+03  5000000E+02  9617692E+02  1923538E+01  2372164E+01  2662268E+02  7290000E+03
333333E+00  1280772E+02  2500000E+04  1779273E+05  5822000E+04  8000000E+01  1822500E+07  166667E+02
6411795E+00  1121808E+05  1800000E+02  5188360E+04  6405832E+04  3645000E+05  3202691E+06  4150686E+05
731185E+04  8653923E+05  2916000E+06  5500000E+00
    
```

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TRANSGENERATED DATA INPUT

GROUP NUMBER 1
7407564E+01 -3703782E+03 -5000000E+02 -9746794E+02 1949358E+01 -2469188E+01 -3508846E+02 -7290000E+03
3333333E+00 -1333331E+03 2500000E+04 -1851891E+05 -5832000E+04 -6000000E+01 -1822500E+07 -1666667E+02
6497893E+00 -1136886E+05 -1800000E+02 5400114E+04 6666807E+04 -3645000E+05 -3333404E+06 -4320091E+05
1754423E+04 -8772115E+05 2916000E+06 5507000E+00
CASE NUMBER 593
GROUP NUMBER 1
3701883E+01 -3850941E+03 -5000000E+02 -8874209E+02 1874842E+01 -2567294E+01 -3554715E+02 -7290000E+03
3333333E+00 -1388339E+03 2500000E+04 -1825471E+05 -5832000E+04 -6000000E+01 -1822500E+07 -1666667E+02
6582806E+00 -1151728E+05 -1800000E+02 5614673E+04 8831695E+04 -3645000E+05 -3465847E+06 -4491738E+05
1777358E+04 -8886788E+05 2916000E+06 5555000E+00
CASE NUMBER 595
GROUP NUMBER 1
8000000E+01 -4000000E+03 -5000000E+02 -1000000E+03 2000000E+01 -2646667E+01 -3600000E+02 -7290000E+03
3333333E+00 -1440000E+03 2500000E+04 -2000000E+05 -5832000E+04 -6000000E+01 -1822500E+07 -1666667E+02
6666667E+00 -1166400E+05 -1800000E+02 5832000E+04 7200000E+04 -3645000E+05 -3600000E+06 -4666600E+05
1800000E+04 -9000000E+05 2916000E+06 5671000E+00
CASE NUMBER 596
GROUP NUMBER 1
0 0 -5000000E+02 0 0 0 0 1000000E+04
2162278E+00 -2500000E+04 0 -5832000E+04 -582100E+01 2500000E+07 -1581139E+02
0 0 -1800000E+02 0 0 -5000000E+05 0
0 0 2916000E+06 3200000E+00
CASE NUMBER 597
GROUP NUMBER 1
353534E+00 -1747747E+02 -5000000E+02 -353534E+02 7071068E+00 -1119034E+00 -1272792E+02 -1000000E+04
3142278E+00 -6263961E+01 2500000E+04 8838835E+03 -5832000E+04 -582100E+01 2500000E+07 -1581139E+02
2236058E+00 -4123847E+04 -1800000E+02 253534E+02 3181981E+03 -5000000E+05 -1590990E+05 -2061923E+04
633981E+03 -3181981E+05 2916000E+06 3545000E+00
CASE NUMBER 598
GROUP NUMBER 1
1000000E+01 -5000000E+03 -5000000E+02 -5000000E+02 1000000E+01 3142278E+00 -1800000E+02 -1000000E+04
3142278E+00 -1800000E+02 2500000E+04 2500000E+04 -5832000E+04 -582100E+01 2500000E+07 -1581139E+02
3142278E+00 -5832000E+04 -1800000E+02 -1000000E+04 9000000E+03 -5000000E+05 -4500000E+05 -5832000E+04
9000000E+03 -4500000E+05 2916000E+06 3882000E+00
CASE NUMBER 599
GROUP NUMBER 1
1837117E+01 -918587E+02 -5000000E+02 -6123724E+02 1224745E+01 -5809475E+00 -2204541E+02 -1000000E+04
3142278E+00 -3306811E+02 2500000E+04 4592782E+04 -5832000E+04 -582100E+01 2500000E+07 -1581139E+02
3872983E+00 -7142712E+04 -1800000E+02 1837117E+04 1653406E+04 -5000000E+05 -8267028E+05 -1071407E+05
1102770E+04 -5511352E+05 2916000E+06 4170000E+00
CASE NUMBER 600
GROUP NUMBER 1
2828427E+01 -1484214E+03 -5000000E+02 -7071068E+02 1414214E+01 -8944272E+00 -2645584E+02 -1000000E+04
3142278E+00 -309189E+02 2500000E+04 -7071068E+04 -5832000E+04 -582100E+01 2500000E+07 -1581139E+02
4472136E+00 -8247693E+04 -1800000E+02 2828427E+04 2545584E+04 -5000000E+05 -1272792E+06 -1649526E+05
1272792E+04 -6263961E+05 2916000E+06 4487000E+00

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TRANSGENERATED DATA INPUT

GROUP NUMBER 1
3532947E+01 -1878424E+03 -5000000E+02 -790584E+02 1581139E+01 -1250000E+01 -2844050E+02 -1000000E+04
3142278E+00 -7115125E+02 2500000E+04 9882118E+04 -5832000E+04 -582100E+01 2500000E+07 -1581139E+02
5000000E+00 -9221202E+04 -1800000E+02 3952847E+04 3557562E+04 -5000000E+05 -1776781E+06 -2303300E+05
1423025E+04 -7115125E+05 2916000E+06 4808000E+00
CASE NUMBER 602
GROUP NUMBER 1
5196152E+01 -2598078E+03 -5000000E+02 -8660254E+02 1722051E+01 -1642188E+01 -3117691E+02 -1000000E+04
3142278E+00 -9252074E+02 2500000E+04 1299038E+05 -5832000E+04 -582100E+01 2500000E+07 -1581139E+02
5477228E+00 -1010132E+03 -1800000E+02 5196152E+04 4676537E+04 -5000000E+05 -2328288E+06 -2020398E+05
1559448E+04 -7794229E+05 2916000E+06 5217000E+00
CASE NUMBER 603
GROUP NUMBER 1
5547400E+01 -327390E+02 -5000000E+02 -8354143E+02 1870829E+01 -2070638E+01 -387492E+02 -1000000E+04
3142278E+00 -1178622E+03 2500000E+04 1636975E+05 -5832000E+04 -582100E+01 2500000E+07 -1581139E+02
5916080E+00 -1091067E+05 -1800000E+02 6547900E+04 3893110E+04 -5000000E+05 -2946555E+06 -3818736E+05
1683746E+04 -8418729E+05 2916000E+06 5500000E+00
CASE NUMBER 604
GROUP NUMBER 1
6830520E+01 -3415260E+03 -5000000E+02 -9488832E+02 1697387E+01 -2160000E+01 -3415260E+02 -1000000E+04
3142278E+00 -1228494E+03 2500000E+04 1707630E+05 -5832000E+04 -582100E+01 2500000E+07 -1581139E+02
4000000E+00 -1108544E+05 -1800000E+02 8830520E+04 6147468E+04 -5000000E+05 -3073734E+06 -2983559E+05
1707630E+04 -8539150E+05 2916000E+06 5509000E+00
CASE NUMBER 605
GROUP NUMBER 1
7117092E+01 -3558546E+03 -5000000E+02 -8617892E+02 1923538E+01 -2250622E+01 -3462369E+02 -1000000E+04
3142278E+00 -1281077E+03 2500000E+04 1778272E+05 -5832000E+04 -582100E+01 2500000E+07 -1581139E+02
4082763E+00 -1121809E+05 -1800000E+02 7117092E+04 6405383E+04 -5000000E+05 -3202891E+06 -4150688E+05
1731185E+04 -8855923E+05 2916000E+06 5568000E+00
CASE NUMBER 606
GROUP NUMBER 1
7407564E+01 -3703782E+03 -5000000E+02 -9746794E+02 1949358E+01 -2442477E+01 -3508846E+02 -1000000E+04
3142278E+00 -1333281E+03 2500000E+04 1851891E+05 -5832000E+04 -582100E+01 2500000E+07 -1581139E+02
6184414E+00 -1136886E+05 -1800000E+02 7407564E+04 6666807E+04 -5000000E+05 -3333404E+06 -4320091E+05
1754423E+04 -8772115E+05 2916000E+06 5629000E+00
CASE NUMBER 607
GROUP NUMBER 1
0 0 -5000000E+02 0 0 0 0 1728000E+04
2888751E+00 -2500000E+04 0 -5832000E+04 -5196152E+01 4320000E+07 -1443376E+02
0 0 -1800000E+02 0 0 -6400000E+05 0
0 0 2916000E+06 3346000E+00
CASE NUMBER 608
GROUP NUMBER 1
353534E+00 -1767747E+02 -5000000E+02 -353534E+02 7071068E+00 -1020621E+00 -1272792E+02 -1728000E+04
2888751E+00 -6263961E+01 2500000E+04 8838835E+03 -5832000E+04 -5196152E+01 4320000E+07 -1443376E+02
2041261E+00 -4123847E+04 -1800000E+02 6109402E+03 2181981E+03 -3840000E+05 -1590990E+05 -2061923E+04
633981E+03 -3181981E+05 2916000E+06 3707000E+00

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DATA INPUT

CASE NUMBER 609

		GROUP NUMBER 1	
1000000E+01	-5000000E-02	5000000E-02	-5000000E-02
2886751E+00	-1800000E-02	2500000E+04	2500000E-04
2886751E+00	-5832000E-04	1800000E-02	1728000E-04
9000000E-03	-4500000E-05	2916000E-06	4078000E-00

CASE NUMBER 610

		GROUP NUMBER 1	
1837117E-01	-8185587E-02	5000000E-02	-6123724E-02
2886751E+00	-3304811E-02	2500000E+04	4592793E-04
353534E+00	-7142712E-04	1800000E-02	3174538E+04
1102270E-04	-5511352E-05	2916000E-06	4378000E-00

CASE NUMBER 611

		GROUP NUMBER 1	
2828427E+01	-1414214E-03	5000000E-02	-7071068E-02
2886751E+00	-5091169E-02	2500000E+04	7071068E-04
4082483E+00	-8247893E-04	1800000E-02	4887522E-04
1272792E-04	-6363961E-05	2916000E-06	4672000E-00

CASE NUMBER 612

		GROUP NUMBER 1	
2852847E-01	-1978424E-03	5000000E-02	-7905694E-02
2886751E+00	-7115125E-02	2500000E+04	9882118E-04
4584355E+00	-9221202E-04	1800000E-02	8830520E+04
1423025E-04	-7115125E-05	2916000E-06	5028000E-00

CASE NUMBER 613

		GROUP NUMBER 1	
5196152E+01	-2598076E-03	5000000E-02	-8640254E-02
2886751E+00	-9353074E-02	2500000E+04	1299038E-05
5000000E+00	-1010132E-05	1800000E-02	8978951E-04
1558846E-04	-7794228E-05	2916000E-06	5488000E-00

CASE NUMBER 614

		GROUP NUMBER 1	
3458113E-01	-2729057E-03	5000000E-02	-8803408E-02
2886751E+00	-9424694E-02	2500000E+04	1264528E-03
5082450E+00	-1026803E-05	1800000E-02	8831620E+04
1584614E-04	-7933068E-05	2916000E-06	5489000E-00

CASE NUMBER 615

		GROUP NUMBER 1	
5724344E-01	-2862167E-03	5000000E-02	-8944272E-02
2886751E+00	-1030380E-03	2500000E+04	1431084E-05
5163978E+00	-1043260E-05	1800000E-02	9891648E-04
1609969E-04	-8049845E-05	2916000E-06	5507000E-00

CASE NUMBER 616

		GROUP NUMBER 1	
589748E-01	-2997374E-03	5000000E-02	-9082951E-02
2886751E+00	-1079055E-03	2500000E+04	1488887E-05
5244044E+00	-1058423E-05	1800000E-02	1035882E-05
1634931E-04	-8174658E-05	2916000E-06	5547000E-00

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DATA INPUT

CASE NUMBER 617

		GROUP NUMBER 1	
8269290E-01	-3134845E-03	5000000E-02	-9219544E-02
2886751E+00	-1128472E-03	2500000E+04	1587232E-05
522390E+00	-1075731E-05	1800000E-02	9832000E-04
1659518E-04	-8297590E-05	2916000E-06	5680000E-00

CASE NUMBER 618

		GROUP NUMBER 1	
0.	0.	5000000E-02	0.
2826129E+00	0.	2500000E+04	-5832000E-04
0.	0.	1800000E-02	-4727032E-01
0.	0.	2916000E-06	7621562E-07

CASE NUMBER 619

		GROUP NUMBER 1	
353534E+00	-1787787E-02	5000000E-02	-3535344E-02
2826129E+00	-8383981E-01	2500000E-04	7071068E+00
1858953E+00	-4123847E-04	1800000E-02	9284767E-01
6263961E-03	-3181981E-05	2916000E-06	-1272792E-02

CASE NUMBER 620

		GROUP NUMBER 1	
1000000E+01	-5000000E-02	5000000E-02	-5000000E-02
2826129E+00	-1800000E-02	2500000E+04	5000000E-04
2826129E+00	-5832000E-04	1800000E-02	1000000E-01
9000000E-03	-4500000E-05	2916000E-06	2826129E-00

CASE NUMBER 621

		GROUP NUMBER 1	
1759334E-01	-8751888E-02	5000000E-02	-8025738E-02
2826129E+00	-315801E-02	2500000E+04	1205148E-01
3164872E+00	-7028421E-04	1800000E-02	4596601E+00
1084633E-04	-5423165E-05	2916000E-06	-4727032E-01

CASE NUMBER 622

		GROUP NUMBER 1	
2828427E-01	-1414214E-03	5000000E-02	-7071068E-02
2826129E+00	-5091169E-02	2500000E+04	7071068E-04
3713907E+00	-8247893E-04	1800000E-02	5832000E-04
1272792E-04	-6363961E-05	2916000E-06	-4727032E-01

CASE NUMBER 623

		GROUP NUMBER 1	
3852847E-01	-1978424E-03	5000000E-02	-7905694E-02
2826129E+00	-7115125E-02	2500000E+04	1581139E-01
4152274E+00	-9221202E-04	1800000E-02	1038068E-01
1423025E-04	-7115125E-05	2916000E-06	-2846050E-02

CASE NUMBER 624

		GROUP NUMBER 1	
4192374E-01	-2096187E-03	5000000E-02	-8062258E-02
2826129E+00	-7546273E-02	2500000E+04	1812452E+01
4234505E+00	-9403817E-04	1800000E-02	1100971E-01
1451206E-04	-7256032E-05	2916000E-06	-2902413E-02

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TRANSGENERATED
DATA INPUT
CASE NUMBER 625
4434553E+01 2218274E+03 5000000E+02 8215838E+02 1643148E+01 1650966E+01 2957702E+02 3048625E+04
2626129E+00 7848795E+02 2500000E+04 1109138E+05 5832000E+04 4727032E+01 7621562E+07 1313064E+02
4315170E+00 8582154E+04 1800000E+02 132539E+05 3982897E+04 152413E+06 1996448E+06 2587388E+05
1478851E+04 7394255E+05 2916000E+06 5484000E+00
CASE NUMBER 626
4685286E+01 2242648E+03 5000000E+02 8366600E+02 1673320E+01 1230419E+01 3011978E+02 3048625E+04
2626129E+00 8433533E+02 2500000E+04 1171324E+05 5832000E+04 4727032E+01 7621562E+07 1313064E+02
4284354E+00 9758803E+04 1800000E+02 1428271E+05 4216767E+04 152413E+06 2108282E+06 2732465E+05
1505988E+04 7529940E+05 2916000E+06 5501000E+00
CASE NUMBER 627
0 0 0 0 0 0 0 3430000E+03
3778645E+00 0 0 0 5832000E+04 6803361E+010 0 0
0 0 1800000E+020 0 0 0 0
0 0 0 2925000E+00
CASE NUMBER 628
333534E+000 0 0 0 7071068E+00 1336306E+00 1272782E+02 3430000E+03
3778645E+00 8363961E+010 0 0 5832000E+04 6803361E+010 0 0
2672612E+00 4123847E+04 1800000E+02 1212888E+030 0 0 0 2081923E+04
0 0 0 3190000E+00
CASE NUMBER 629
1000000E+010 0 0 0 1000000E+01 3778645E+00 1800000E+02 3430000E+03
3778645E+00 1800000E+020 0 0 5832000E+04 6803361E+010 0 0
3778645E+00 5832000E+04 1800000E+02 3430000E+030 0 0 0 5832000E+04
0 0 0 3473000E+00
CASE NUMBER 630
1739584E+010 0 0 0 1202878E+01 8575011E+00 2168816E+02 3430000E+03
3778645E+00 3131252E+020 0 0 5832000E+04 6803361E+010 0 0
4545886E+00 7014004E+04 1800000E+02 5968774E+030 0 0 0 1014526E+05
0 0 0 3683000E+00
CASE NUMBER 631
2828427E+010 0 0 0 1414214E+01 1069045E+01 2545584E+02 3430000E+03
3778645E+00 5091168E+020 0 0 5832000E+04 6803361E+010 0 0
5345225E+00 8247693E+04 1800000E+02 3701505E+030 0 0 0 1649538E+05
0 0 0 3885000E+00
CASE NUMBER 632
400945E+010 0 0 0 1588850E+01 1515430E+01 2858570E+02 3430000E+03
3778645E+00 7217011E+020 0 0 5832000E+04 6803361E+010 0 0
6004533E+00 3265008E+04 1800000E+02 1375242E+040 0 0 0 2338312E+05
0 0 0 4140000E+00
    
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DATA INPUT
CASE NUMBER 633
5196152E+010 0 0 0 1732051E+01 1963861E+01 3117691E+02 3430000E+03
3778645E+00 9353074E+020 0 0 5832000E+04 6803361E+010 0 0
8548537E+00 1010132E+05 1800000E+02 1782280E+040 0 0 0 3030396E+05
0 0 0 4415000E+00
CASE NUMBER 634
8547800E+010 0 0 0 1870829E+01 2474874E+01 3367492E+02 3430000E+03
3778645E+00 1178622E+030 0 0 5832000E+04 6803361E+010 0 0
7071068E+00 1091047E+05 1800000E+02 2245930E+040 0 0 0 3818736E+05
0 0 0 4721000E+00
CASE NUMBER 635
8000000E+010 0 0 0 2000000E+01 3022716E+01 3600000E+02 3430000E+03
3778645E+00 1440000E+010 0 0 5832000E+04 6803361E+010 0 0
7559289E+00 1166400E+05 1800000E+02 2744000E+040 0 0 0 4665600E+05
0 0 0 5088000E+00
CASE NUMBER 636
8301867E+010 0 0 0 2024846E+01 3137811E+01 3644722E+02 3430000E+03
3778645E+00 1494336E+030 0 0 5832000E+04 6803361E+010 0 0
7653197E+00 1180890E+05 1800000E+02 2847540E+040 0 0 0 4841848E+05
0 0 0 5159000E+00
CASE NUMBER 637
8607439E+010 0 0 0 2049390E+01 3253066E+01 3688902E+02 3430000E+03
3778645E+00 1549339E+030 0 0 5832000E+04 6803361E+010 0 0
7745967E+00 1195204E+05 1800000E+02 2952351E+040 0 0 0 5019858E+05
0 0 0 5240000E+00
CASE NUMBER 638
8916670E+010 0 0 0 2073644E+01 3370184E+01 3732558E+02 3430000E+03
3778645E+00 1605001E+030 0 0 5832000E+04 6803361E+010 0 0
7837838E+00 1209349E+05 1800000E+02 3058418E+040 0 0 0 5200202E+05
0 0 0 5315000E+00
CASE NUMBER 639
9229518E+010 0 0 0 2097618E+01 3488430E+01 3775712E+02 3430000E+03
3778645E+00 1661313E+030 0 0 5832000E+04 6803361E+010 0 0
7928250E+00 1223331E+05 1800000E+02 3165735E+040 0 0 0 5382655E+05
0 0 0 5385000E+00
CASE NUMBER 640
332333E+000 0 0 0 0 0 0 7280000E+03
0 0 0 5832000E+04 6000000E+010 0 0 0
0 0 1800000E+020 0 0 0 0
0 0 0 3003000E+00
    
```

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TRANSGENERATED
DATA INPUT
CASE NUMBER 641
353534E+000 0 0 707108E+00 117851E+00 127279E+02 729000E+03
333333E+00 686866E+010 0 583200E+04 600000E+010 0 0
235703E+00 412384E+04 180000E+02 257740E+030 0 0 206192E+04
0 0 331000E+00
CASE NUMBER 642
100000E+010 0 0 100000E+01 333333E+00 180000E+02 729000E+03
333333E+00 180000E+020 0 583200E+04 600000E+010 0 0
333333E+00 583200E+04 180000E+02 729000E+030 0 0 583200E+04
0 0 360100E+00
CASE NUMBER 643
183717E+010 0 0 122474E+01 812372E+00 220454E+02 729000E+03
333333E+00 330881E+020 0 583200E+04 600000E+010 0 0
408248E+00 714271E+04 180000E+02 133825E+040 0 0 107140E+05
0 0 388700E+00
CASE NUMBER 644
282842E+010 0 0 141421E+01 842809E+00 254558E+02 729000E+03
333333E+00 509116E+020 0 583200E+04 600000E+010 0 0
471404E+00 824769E+04 180000E+02 206192E+040 0 0 164953E+05
0 0 411200E+00
CASE NUMBER 645
385294E+010 0 0 158113E+01 131761E+01 284605E+02 729000E+03
333333E+00 711512E+020 0 583200E+04 600000E+010 0 0
527043E+00 922120E+04 180000E+02 288126E+040 0 0 230530E+05
0 0 435400E+00
CASE NUMBER 646
519615E+010 0 0 173205E+01 173205E+01 311769E+02 729000E+03
333333E+00 935307E+020 0 583200E+04 600000E+010 0 0
577350E+00 101013E+05 180000E+02 378795E+040 0 0 303036E+05
0 0 466500E+00
CASE NUMBER 647
854790E+010 0 0 187082E+01 218262E+01 338749E+02 729000E+03
333333E+00 117862E+030 0 583200E+04 600000E+010 0 0
423608E+00 108106E+05 180000E+02 477341E+040 0 0 381272E+05
0 0 508600E+00
CASE NUMBER 648
683052E+010 0 0 188736E+01 227684E+01 341526E+02 729000E+03
333333E+00 122949E+030 0 583200E+04 600000E+010 0 0
632455E+00 110654E+05 180000E+02 497944E+040 0 0 398359E+05
0 0 518200E+00
    
```

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TRANSGENERATED
DATA INPUT
CASE NUMBER 649
717082E+010 0 0 192353E+01 237234E+01 346236E+02 729000E+03
333333E+00 128107E+030 0 583200E+04 600000E+010 0 0
641179E+00 112180E+05 180000E+02 518836E+040 0 0 415068E+05
0 0 525900E+00
CASE NUMBER 650
740754E+010 0 0 194935E+01 246918E+01 350884E+02 729000E+03
333333E+00 133316E+030 0 583200E+04 600000E+010 0 0
649786E+00 113688E+05 180000E+02 540014E+040 0 0 432009E+05
0 0 532800E+00
CASE NUMBER 651
770188E+010 0 0 197484E+01 256729E+01 355471E+02 729000E+03
333333E+00 138622E+030 0 583200E+04 600000E+010 0 0
658280E+00 115172E+05 180000E+02 561487E+040 0 0 449173E+05
0 0 540200E+00
CASE NUMBER 652
316227E+000 0 0 0 0 100000E+04
0 0 0 583200E+04 569210E+010 0 0
0 0 180000E+020 0 0 0
0 0 308200E+00
CASE NUMBER 653
353534E+000 0 0 707108E+00 111803E+00 127279E+02 100000E+04
316227E+00 816391E+010 0 583200E+04 569210E+010 0 0
227406E+00 412384E+04 180000E+02 353534E+030 0 0 206192E+04
0 0 339300E+00
CASE NUMBER 654
100000E+010 0 0 100000E+01 316227E+00 180000E+02 100000E+04
316227E+00 180000E+020 0 583200E+04 569210E+010 0 0
316227E+00 583200E+04 180000E+02 100000E+040 0 0 583200E+04
0 0 389900E+00
CASE NUMBER 655
183717E+010 0 0 122474E+01 809475E+00 220454E+02 100000E+04
316227E+00 330881E+020 0 583200E+04 569210E+010 0 0
387283E+00 714271E+04 180000E+02 163717E+040 0 0 107140E+05
0 0 399900E+00
CASE NUMBER 656
282842E+010 0 0 141421E+01 884427E+00 254558E+02 100000E+04
316227E+00 509116E+020 0 583200E+04 569210E+010 0 0
447213E+00 824769E+04 180000E+02 282842E+040 0 0 164953E+05
0 0 417600E+00
    
```

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TRANSGENERATED
DATA INPUT
CASE NUMBER 657
3952847E+010 0 0 1581138E-01 250000E+01 2846050E+02 1000000E+04
3162278E+00 7115125E+020 0 5832000E-04 5682100E-010 0
5000000E+00 8221202E+04 1800000E-02 2952847E+040 0 2305300E-05
0 0 4460000E-00
CASE NUMBER 658
5198152E+010 0 0 1732051E-01 1643168E+01 3117891E-02 1000000E-04
3162278E+00 9353074E+020 0 5832000E-04 5682100E-010 0
5477228E+00 1010132E+05 1800000E-02 5198152E+040 0 3030396E-05
0 0 4787000E-00
CASE NUMBER 659
6547900E+010 0 0 1870829E-01 2070428E+01 3367482E-02 1000000E-04
3162278E+00 1178622E+030 0 5832000E-04 5682100E-010 0
5916080E+00 1081087E+05 1800000E-02 6547900E+040 0 387836E-05
0 0 5273000E-00
CASE NUMBER 660
6030520E+010 0 0 1897387E-01 2180000E+01 3415260E-02 1000000E-04
3162278E+00 1229484E+030 0 5832000E-04 5682100E-010 0
6000000E+00 1108544E+05 1800000E-02 6030520E+040 0 3983559E-05
0 0 5343000E-00
CASE NUMBER 661
2886751E+000 0 0 5832000E-04 5198152E-010 0 1728000E-04
0 0 1800000E-020 0 0 0
0 0 3172000E-00
CASE NUMBER 662
353534E+000 0 0 7071048E-01 5020621E+01 1272792E-02 1728000E-04
2886751E+00 6383981E+010 0 5832000E-04 5198152E-010 0
2041241E+00 4123847E+04 1800000E-02 4109403E+030 0 2061923E-04
0 0 3511000E-00
CASE NUMBER 663
1000000E+010 0 0 1000000E-01 2886751E+00 1800000E-02 1728000E-04
2886751E+00 1800000E+020 0 5832000E-04 5198152E-010 0
2886751E+00 5832000E+04 1800000E-02 1728000E+040 0 5832000E-04
0 0 5832000E-00
CASE NUMBER 664
1827117E+010 0 0 1224745E-01 5203301E+01 2204541E-02 1728000E-04
2886751E+00 3306811E+020 0 5832000E-04 5198152E-010 0
353534E+00 7142712E+04 1800000E-02 3174538E+040 0 1071407E-05
0 0 4074000E-00

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TRANSGENERATED
DATA INPUT
CASE NUMBER 665
2886751E+010 0 0 1414214E-01 8184966E+01 2545584E-02 1728000E+04
2886751E+00 5091168E+020 0 5832000E-04 5198152E-010 0
408283E+00 8247683E+04 1800000E-02 4887522E+040 0 1648539E-05
0 0 4343000E-00
CASE NUMBER 666
3952847E+010 0 0 1581138E-01 2747089E+01 2846050E-02 1728000E-04
2886751E+00 7115125E+020 0 5832000E-04 5198152E-010 0
456435E+00 8221202E+04 1800000E-02 3930520E+040 0 2305300E-05
0 0 4667000E-00
CASE NUMBER 667
5198152E+010 0 0 1732051E-01 1500000E+01 3117891E-02 1728000E-04
2886751E+00 9353074E+020 0 5832000E-04 5198152E-010 0
5000000E+00 1010132E+05 1800000E-02 5198152E+040 0 3030396E-05
0 0 5107000E-00
CASE NUMBER 668
5458113E+010 0 0 1760882E-01 1575622E+01 3169227E-02 1728000E-04
2886751E+00 9824604E+020 0 5832000E-04 5198152E-010 0
5082650E+00 1026830E+05 1800000E-02 5431620E+040 0 3183172E-05
0 0 5196000E-00
CASE NUMBER 669
5724334E+010 0 0 1788854E-01 1652472E+01 3219938E-02 1728000E-04
2886751E+00 1030380E+030 0 5832000E-04 5198152E-010 0
5182978E+00 1043280E+05 1800000E-02 5891648E+040 0 3338432E-05
0 0 5288000E-00
CASE NUMBER 670
2626129E+000 0 0 5832000E-04 4727032E-010 0 3048625E-04
0 0 1800000E-020 0 0 0
0 0 3270000E-00
CASE NUMBER 671
353534E+000 0 0 7071048E-01 5284767E+01 1272792E-02 3048625E-04
2626129E+00 6383981E+010 0 5832000E-04 4727032E-010 0
1858953E+00 4123847E+04 1800000E-02 1077852E+040 0 2061923E-04
0 0 2821000E-00
CASE NUMBER 672
1000000E+010 0 0 1000000E-01 2626129E+00 1800000E-02 3048625E-04
2626129E+00 800000E+020 0 5832000E-04 4727032E-010 0
2626129E+00 5832000E+04 1800000E-02 3048625E+040 0 5832000E-04
0 0 3975000E-00

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TRANSGENERATED
DATA INPUT
CASE NUMBER 673
1837117E+01 0. 0. 1224745E+01 6824504E+00 2204541E+02 3048625E+04
2626129E+00 -3306811E+02 0. 0. 5832000E+04 -4727032E+01 0. 0.
3216338E+00 -7142712E+04 -1800000E+02 -5600682E+040 0. 0. 1071407E+05
0. 0. 4247000E+00
CASE NUMBER 674
2828427E+01 0. 0. 1414214E+01 7427814E+00 2545584E+02 3048625E+04
2626129E+00 -5091169E+02 0. 0. 5832000E+04 -4727032E+01 0. 0.
3713907E+00 -8247693E+04 -1800000E+02 -8622814E+040 0. 0. 1649539E+05
0. 0. 4562000E+00
CASE NUMBER 675
3952847E+01 0. 0. 1581138E+01 1498038E+01 2846050E+02 3048625E+04
2626129E+00 -7115125E+02 0. 0. 5832000E+04 -4727032E+01 0. 0.
4152274E+00 -9221202E+04 -1800000E+02 -1205075E+050 0. 0. 2305100E+05
0. 0. 4840000E+00
CASE NUMBER 676
4182374E+01 0. 0. 1612452E+01 1100971E+01 2902413E+02 3048625E+04
2626129E+00 -7546273E+02 0. 0. 5832000E+04 -4727032E+01 0. 0.
4234505E+00 -5403817E+04 -1800000E+02 -1278098E+050 0. 0. 2444983E+05
0. 0. 5029000E+00
CASE NUMBER 677
0. 1000000E+030. 0. 0. 5832000E+04 -6803361E+01 3430000E+07 3430000E+03
3779645E+000. 1000000E+050. 0. 0. 5832000E+04 -6803361E+01 3430000E+07 3779645E+02
0. 0. 1800000E+020. 0. 0. 3430000E+050. 0. 0.
0. 0. 5832000E+06 2648000E+00
CASE NUMBER 678
353534E+00 353534E+02 1000000E+03 7071068E+02 7071068E+00 1336306E+00 1272792E+02 3430000E+03
3779645E+00 -6363961E+01 1000000E+05 2828427E+04 5832000E+04 -6803361E+01 3430000E+07 3779645E+02
2626129E+00 -4123847E+04 -1800000E+02 -1212688E+03 -6363961E+03 3430000E+05 -6363961E+05 -2061923E+04
-1272792E+04 -1272792E+06 -5832000E+06 2898000E+00
CASE NUMBER 679
1000000E+01 1000000E+03 1000000E+03 1000000E+01 1000000E+01 3779645E+00 1800000E+02 3430000E+03
3779645E+00 -1800000E+02 1000000E+05 1000000E+05 5832000E+04 -6803361E+01 3430000E+07 3779645E+02
3779645E+00 -5832000E+04 -1800000E+02 -3430000E+03 1800000E+04 3430000E+05 -1800000E+06 -5832000E+04
-1800000E+04 -1800000E+06 -5832000E+06 3133000E+00
CASE NUMBER 680
1837117E+01 1837117E+03 1000000E+03 1224745E+03 1224745E+01 6843651E+00 2204541E+02 3430000E+03
3779645E+00 -3306811E+02 1000000E+05 837117E+05 5832000E+04 -6803361E+01 3430000E+07 3779645E+02
4629100E+00 -7142712E+04 -1800000E+02 -6301312E+03 3306811E+04 3430000E+05 -3306811E+06 -1071407E+05
-2204541E+04 -2204541E+06 -5832000E+06 3333000E+00

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TRANSGENERATED
DATA INPUT
CASE NUMBER 681
2828427E+01 2828427E+03 1000000E+03 1414214E+03 1414214E+01 1066045E+01 2545584E+02 3430000E+03
3779645E+00 -5091169E+02 1000000E+05 2828427E+05 5832000E+04 -6803361E+01 3430000E+07 3779645E+02
5345225E+00 -8247693E+04 -1800000E+02 9701505E+03 5091169E+04 3430000E+05 -5091169E+06 -1649539E+05
-2545584E+04 2545584E+06 5832000E+06 3508000E+00
CASE NUMBER 682
3952847E+01 3952847E+03 1000000E+03 1581138E+03 1581138E+01 1498038E+01 2846050E+02 3430000E+03
3779645E+00 -7115125E+02 1000000E+05 3952847E+05 5832000E+04 -6803361E+01 3430000E+07 3779645E+02
5976143E+00 -9221202E+04 -1800000E+02 1355827E+04 7115125E+04 3430000E+05 -7115125E+06 -2305100E+05
-2846050E+04 2846050E+06 -5832000E+06 3722000E+00
CASE NUMBER 683
5196152E+01 5196152E+03 1000000E+03 1732051E+03 1732051E+01 1963961E+01 3117691E+02 3430000E+03
3779645E+00 -9353074E+02 1000000E+05 5196152E+05 5832000E+04 -6803361E+01 3430000E+07 3779645E+02
6546537E+00 -1010132E+05 -1800000E+02 1782280E+04 9353074E+04 3430000E+05 -9353074E+06 -3030396E+05
-3117691E+04 3117691E+06 -5832000E+06 3964000E+00
CASE NUMBER 684
6547900E+01 6547900E+03 1000000E+03 1870828E+03 1870828E+01 2478874E+01 3367492E+02 3430000E+03
3779645E+00 -1178622E+02 1000000E+05 6547900E+05 5832000E+04 -6803361E+01 3430000E+07 3779645E+02
7071068E+00 -1091047E+05 -1800000E+02 2245930E+04 1178622E+05 3430000E+05 -1178622E+07 -3818736E+05
-3367492E+04 3367492E+06 -5832000E+06 4242000E+00
CASE NUMBER 685
8000000E+01 8000000E+03 1000000E+03 2000000E+03 2000000E+01 3023716E+01 1600000E+02 3430000E+03
3779645E+00 -1440000E+03 1000000E+05 8000000E+05 5832000E+04 -6803361E+01 3430000E+07 3779645E+02
7559238E+00 -1168400E+05 -1800000E+02 2744000E+04 1440000E+05 3430000E+05 -1440000E+07 -4665600E+05
-2600000E+04 2600000E+06 -5832000E+06 4510000E+00
CASE NUMBER 686
8301867E+01 8301867E+03 1000000E+03 2024846E+03 2024846E+01 3137811E+01 2844722E+02 3430000E+03
3779645E+00 -1494336E+03 1000000E+05 8301867E+05 5832000E+04 -6803361E+01 3430000E+07 3779645E+02
7652197E+00 -1180890E+05 -1800000E+02 2847540E+04 1494336E+05 3430000E+05 -1494336E+07 -4841641E+05
-3644722E+04 3644722E+06 -5832000E+06 4574000E+00
CASE NUMBER 687
0. 1000000E+030. 0. 0. 5832000E+04 -6800000E+01 7290000E+07 7290000E+03
3333333E+000. 1000000E+050. 0. 0. 5832000E+04 -6800000E+01 7290000E+07 3333333E+02
0. 0. 1800000E+020. 0. 0. 7290000E+050. 0. 0.
0. 0. 5832000E+06 2750000E+00
CASE NUMBER 688
353534E+00 353534E+02 1000000E+03 7071068E+02 7071068E+00 1178611E+00 1272792E+02 3430000E+03
3333333E+00 -6363961E+01 1000000E+05 353534E+04 5832000E+04 -6800000E+01 7290000E+07 3333333E+02
2357023E+00 -4123847E+04 -1800000E+02 -2577404E+03 6363961E+03 3430000E+05 -6363961E+05 -2061923E+04
-1272792E+04 -1272792E+06 -5832000E+06 3019000E+00

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TRANSGENERATED

DATA INPUT

CASE NUMBER	688	GROUP NUMBER	1
1000000E+01	1000000E+03	1000000E+03	1000000E+01
3333333E+00	1800000E+02	1000000E+05	1000000E+05
3333333E+00	5832000E-04	1800000E+02	7290000E-03
1800000E+04	1800000E-06	5832000E-06	3259000E-00
CASE NUMBER	690	GROUP NUMBER	1
1837117E+01	1837117E+03	1000000E+03	1224745E+03
3333333E+00	3306811E+02	1000000E+05	1837117E+03
4882483E+00	7182712E+04	1800000E-02	1338358E+04
2204541E+04	2204541E+06	5832000E-06	3448000E-00
CASE NUMBER	691	GROUP NUMBER	1
2828427E+01	2828427E+03	1000000E+03	1414214E+03
3333333E+00	5091169E-02	1000000E+05	2828427E-05
4714043E+00	8247693E-04	1800000E-02	2061923E-04
2545584E+04	2545584E-06	5832000E-06	3667000E-00
CASE NUMBER	692	GROUP NUMBER	1
3852847E+01	3852847E+03	1000000E+03	1581139E+03
3333333E+00	7115125E+02	1000000E+05	3852847E+03
5230483E+00	9221202E+04	1800000E-02	2881628E+04
2846050E+04	2846050E-06	5832000E-06	3915000E-00
CASE NUMBER	693	GROUP NUMBER	1
5196152E+01	5196152E+03	1000000E+03	1732051E+03
3333333E+00	9353074E-02	1000000E+05	5196152E-05
5773503E+00	1010132E+05	1800000E-02	3787995E-04
3117891E+04	3117891E-06	5832000E-06	4201000E-00
CASE NUMBER	694	GROUP NUMBER	1
8547900E+01	8547900E+03	1000000E+03	1870829E+03
3333333E+00	1178822E+02	1000000E+05	8547900E+03
6236086E+00	1681057E+05	1800000E-02	4773418E+04
3367492E+04	3367492E-06	5832000E-06	4525000E-00
CASE NUMBER	695	GROUP NUMBER	1
6830520E+01	6830520E+03	1000000E+03	1897367E+03
3333333E+00	1229494E-02	1000000E+05	6830520E-05
6324515E+00	1106544E+05	1800000E-02	4978448E-04
3415260E+04	3415260E-06	5832000E-06	4589000E-00
CASE NUMBER	696	GROUP NUMBER	1
0	0	1000000E+03	0
3162278E+00	0	1000000E+05	5832000E-04
0	0	1800000E-02	5832100E-01
0	0	5832000E-06	2783000E-00

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TRANSGENERATED

DATA INPUT

CASE NUMBER	697	GROUP NUMBER	1
3535534E+00	3535534E+02	1000000E+03	7071988E-02
3162278E+00	636398E+01	1000000E+05	325254E-04
2326086E+00	1132847E+04	1800000E-02	636398E-03
1272782E+04	1272782E+06	5832000E-06	3054000E-00
CASE NUMBER	698	GROUP NUMBER	1
1000000E+01	1000000E+03	1000000E+03	1000000E+01
3162278E+00	1800000E-02	1000000E+05	5832000E-04
3162278E+00	5832000E-04	1800000E-02	1000000E+04
1800000E+04	1800000E-06	5832000E-06	3312000E-00
CASE NUMBER	699	GROUP NUMBER	1
1837117E+01	1837117E+03	1000000E+03	1224745E+03
3162278E+00	3306811E+02	1000000E+05	1837117E+03
3872983E+00	7182712E+04	1800000E-02	1837117E+04
2204541E+04	2204541E+06	5832000E-06	3517000E-00
CASE NUMBER	700	GROUP NUMBER	1
2828427E+01	2828427E+03	1000000E+03	1414214E+03
3162278E+00	5091169E-02	1000000E+05	2828427E-05
4472136E+00	8247693E-04	1800000E-02	2828427E-04
2545584E+04	2545584E-06	5832000E-06	3749000E-00
CASE NUMBER	701	GROUP NUMBER	1
3852847E+01	3852847E+03	1000000E+03	1581139E+03
3162278E+00	7115125E+02	1000000E+05	3852847E+03
5000000E+00	9221202E+04	1800000E-02	2882847E+04
2846050E+04	2846050E-06	5832000E-06	4014000E-00
CASE NUMBER	702	GROUP NUMBER	1
5196152E+01	5196152E+03	1000000E+03	1732051E+03
3162278E+00	9353074E-02	1000000E+05	5196152E-05
5477282E+00	1010132E+05	1800000E-02	5196152E-04
3117891E+04	3117891E-06	5832000E-06	4317000E-00
CASE NUMBER	703	GROUP NUMBER	1
8547900E+01	8547900E+03	1000000E+03	1870829E+03
3162278E+00	1178822E+02	1000000E+05	8547900E+03
5587764E+00	1628830E+05	1800000E-02	5488113E-04
3162278E+04	3162278E-06	5832000E-06	4380000E-00
CASE NUMBER	704	GROUP NUMBER	1
5724334E+01	5724334E+03	1000000E+03	1788854E+03
3162278E+00	1030380E-02	1000000E+05	5724334E-05
5656854E+00	1043260E+05	1800000E-02	5724334E-04
3219938E+04	3219938E-06	5832000E-06	4446000E-00

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CASE NUMBER	705	GROUP NUMBER	1
3884748E-01	5894748E-03	1000000E-03	1816590E-03
3182278E-00	1079055E-03	1000000E-05	5994748E-05
5744563E-00	1059435E-05	1800000E-02	5994748E-04
3268862E-04	3268862E-06	5832000E-06	4517000E-00
CASE NUMBER	706	GROUP NUMBER	1
0	0	1000000E-030	0
2886751E-00	0	1000000E-050	5832000E-04
0	0	1800000E-020	5196152E-01
0	0	5832000E-06	1728000E-08
CASE NUMBER	707	GROUP NUMBER	1
3535534E-00	3535534E-02	1000000E-03	7071068E-02
2886751E-00	6263961E-01	1000000E-05	7071068E-00
2041241E-00	4123847E-04	1800000E-02	6109403E-03
1272792E-04	1272792E-06	5832000E-06	3150000E-00
CASE NUMBER	708	GROUP NUMBER	1
1000000E-01	1000000E-03	1000000E-03	1000000E-03
2886751E-00	1800000E-02	1000000E-05	5832000E-04
2886751E-00	5832000E-04	1800000E-02	1728000E-04
1800000E-04	1728000E-06	5832000E-06	3425000E-00
CASE NUMBER	709	GROUP NUMBER	1
1837117E-01	1837117E-03	1000000E-03	1224745E-03
2886751E-00	3306811E-02	1000000E-05	1837117E-05
3535534E-00	7142712E-04	1800000E-02	3174518E-04
2204541E-04	2204541E-06	5832000E-06	3694000E-00
CASE NUMBER	710	GROUP NUMBER	1
2828427E-01	2828427E-03	1000000E-03	1414214E-03
2886751E-00	5091169E-02	1000000E-05	2828427E-05
4082493E-00	8247693E-04	1800000E-02	4887522E-04
2545584E-04	2545584E-06	5832000E-06	3914000E-00
CASE NUMBER	711	GROUP NUMBER	1
3952847E-01	3952847E-03	1000000E-03	1581139E-03
2886751E-00	711525E-02	1000000E-05	3952847E-05
4564355E-00	8221202E-04	1800000E-02	6830520E-04
2846050E-04	2846050E-06	5832000E-06	4209000E-00
CASE NUMBER	712	GROUP NUMBER	1
4192374E-01	4192374E-03	1000000E-03	1612452E-03
2886751E-00	7546273E-02	1000000E-05	4192374E-05
4654747E-00	9403811E-04	1800000E-02	7244422E-04
2902413E-04	2902413E-06	5832000E-06	4274000E-00

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CASE NUMBER	713	GROUP NUMBER	1
4436532E-01	4436532E-03	1000000E-03	1643168E-03
2886751E-00	7985795E-02	1000000E-05	4436532E-05
4743416E-00	582954E-04	1800000E-02	788383E-04
2957702E-04	2957702E-06	5832000E-06	4339000E-00
CASE NUMBER	714	GROUP NUMBER	1
4685296E-01	4685296E-03	1000000E-03	1673320E-03
2886751E-00	8433531E-02	1000000E-05	4685296E-05
4830459E-00	9758803E-04	1800000E-02	8096192E-04
3011976E-04	3011976E-06	5832000E-06	4405000E-00
CASE NUMBER	715	GROUP NUMBER	1
0	0	1000000E-030	0
2626129E-00	0	1000000E-050	5832000E-04
0	0	1800000E-020	4727032E-01
0	0	5832000E-06	3048625E-060
CASE NUMBER	716	GROUP NUMBER	1
3535534E-00	3535534E-02	1000000E-03	7071068E-02
2626129E-00	6363961E-01	1000000E-05	3535534E-04
1858953E-00	4123847E-04	1800000E-02	1077852E-04
1272792E-04	1272792E-06	5832000E-06	3288000E-00
CASE NUMBER	717	GROUP NUMBER	1
1000000E-01	1000000E-03	1000000E-03	1000000E-03
2626129E-00	1800000E-02	1000000E-05	5832000E-04
2626129E-00	5832000E-04	1800000E-02	3048625E-04
1800000E-04	1800000E-06	5832000E-06	3571000E-00
CASE NUMBER	718	GROUP NUMBER	1
1837117E-01	1837117E-03	1000000E-03	1224745E-03
2626129E-00	3306811E-02	1000000E-05	1837117E-05
3214338E-00	7142712E-04	1800000E-02	5600682E-04
2204541E-04	2204541E-06	5832000E-06	3831000E-00
CASE NUMBER	719	GROUP NUMBER	1
2828427E-01	2828427E-03	1000000E-03	1414214E-03
2626129E-00	5091169E-02	1000000E-05	2828427E-05
3713907E-00	8247693E-04	1800000E-02	8622814E-04
2545584E-04	2545584E-06	5832000E-06	4118000E-00
CASE NUMBER	720	GROUP NUMBER	1
3043189E-01	3043189E-03	1000000E-03	1449138E-03
2626129E-00	5477740E-02	1000000E-05	3043189E-05
3895622E-00	8451371E-04	1800000E-02	9277542E-04
2608448E-04	2608448E-06	5832000E-06	4178000E-00

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CASE NUMBER	721	GROUP NUMBER	1
3263127E+01	3263127E+03	1000000E+03	1483240E+03
2626129E+00	5873629E+02	1000000E+05	3263127E+05
3895178E+00	8650254E+04	1000000E+02	3948052E+04
2648831E+04	2668831E+06	5832000E+06	4240000E+00
3488123E+01	3488123E+02	1000000E+03	1516575E+03
2626129E+00	6278621E+02	1000000E+05	3488123E+05
3982771E+00	8844666E+04	1800000E+02	1063398E+05
2728335E+04	2728335E+06	5832000E+06	4307000E+00
0	0	2000000E+030	0
0	0	4000000E+050	0
0	0	1800000E+020	0
0	0	1166400E+07	2515000E+00
3535334E+00	7071068E+02	2000000E+03	1414214E+03
3779645E+00	6382981E+01	4000000E+05	1414214E+05
2672612E+00	4123847E+04	1800000E+02	1212888E+03
2545584E+04	5091169E+06	1166400E+07	2724000E+00
1800000E+01	2000000E+03	2000000E+03	2000000E+03
3779645E+00	1800000E+02	4000000E+05	4000000E+05
3779645E+00	5832000E+04	1800000E+02	3430000E+04
3600000E+04	7200000E+06	1166400E+07	2867000E+00
1837117E+01	3674235E+03	2000000E+03	2449490E+03
3779645E+00	3306811E+02	4000000E+05	7348469E+05
4829100E+00	7142712E+04	1800000E+02	6301312E+03
4409082E+04	8818183E+06	1166400E+07	3021000E+00
2828427E+01	5656894E+03	2000000E+03	2828427E+03
3779645E+00	5091169E+02	4000000E+05	1131271E+05
5345225E+00	8247693E+04	1800000E+02	8701505E+03
5091169E+04	1018234E+07	1166400E+07	3212000E+00
2952847E+01	7905894E+03	2000000E+03	3182278E+03
3779645E+00	7151252E+02	4000000E+05	1581139E+05
5976143E+00	9221202E+04	1800000E+02	1355827E+04
5892100E+04	1138420E+07	1166400E+07	3417000E+00

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CASE NUMBER	729	GROUP NUMBER	1
5196152E+01	0392300E+04	2000000E+03	3464102E+03
3779645E+00	8332074E+02	4000000E+05	2078461E+06
6548537E+00	1010132E+05	1800000E+02	1782280E+04
6235333E+04	747077E+07	1166400E+07	3645000E+00
6547900E+01	1308580E+04	2000000E+03	3741857E+03
3779645E+00	1178822E+03	4000000E+05	2619160E+06
7071068E+00	1091067E+05	1800000E+02	2245830E+04
6734883E+04	1248997E+07	1166400E+07	3915000E+00
6830520E+01	1366104E+04	2000000E+03	3794733E+03
3779645E+00	1229494E+03	4000000E+05	2732208E+06
7171372E+00	1106544E+05	1800000E+02	2342884E+04
6830520E+04	1366104E+07	1166400E+07	3965000E+00
7117092E+01	1423418E+04	2000000E+03	3847077E+03
3779645E+00	1281077E+03	4000000E+05	2846837E+06
7270292E+00	1121808E+05	1800000E+02	2441183E+04
6824738E+04	1384948E+07	1166400E+07	4015000E+00
7407564E+01	1481513E+04	2000000E+03	3898718E+03
3779645E+00	1323361E+03	4000000E+05	2963025E+06
7387884E+00	1138868E+05	1800000E+02	2540794E+04
7071068E+04	1403338E+07	1166400E+07	4069000E+00
7701883E+01	1548377E+04	2000000E+03	3849884E+03
3779645E+00	1386336E+03	4000000E+05	3080753E+06
7484200E+00	1151728E+05	1800000E+02	2641746E+04
7109430E+04	1421886E+07	1166400E+07	4128000E+00
8000000E+01	1800000E+04	2000000E+03	4000000E+03
3779645E+00	1440000E+03	4000000E+05	3200000E+06
7582898E+00	1166400E+05	1800000E+02	2744000E+04
7200000E+04	1440000E+07	1166400E+07	4184000E+00
0	0	2000000E+030	0
0	0	4000000E+050	0
0	0	1800000E+020	0
0	0	1166400E+07	2572000E+00
3333333E+000	0	0	0
0	0	5832000E+04	6000000E+01
0	0	1458000E+060	0
0	0	0	7200000E+03
0	0	0	6666667E+02

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CASE NUMBER 737 GROUP NUMBER 1
 333333E-00 7071068E-02 200000E-03 1414214E-03 7071068E-00 117811E-00 1272782E-02 729000E-03
 333333E-00 636384E-01 400000E-05 1414214E-05 583200E-04 600000E-01 291600E-08 666667E-02
 2357023E-00 4122847E-04 180000E-02 2577404E-03 1272782E-04 145800E-06 2545584E-06 2061823E-04
 2545584E-04 5091169E-06 1166400E-07 279900E+00

CASE NUMBER 738 GROUP NUMBER 1
 100000E-01 200000E-03 200000E-03 200000E-03 100000E-01 333333E-00 180000E-02 729000E-03
 333333E-00 180000E-02 400000E-05 400000E-05 583200E-04 600000E-01 291600E-08 666667E-02
 333333E-00 583200E-04 180000E-02 729000E-03 360000E-04 145800E-06 720000E-06 583200E-04
 360000E-04 720000E-06 1166400E-07 297700E+00

CASE NUMBER 739 GROUP NUMBER 1
 183717E-01 3674235E-03 200000E-03 2448490E-03 122474E-01 6123724E-00 220454E-02 729000E-03
 333333E-00 330681E-02 400000E-05 724846E-05 583200E-04 600000E-01 291600E-08 666667E-02
 4082482E-00 7142712E-04 180000E-02 133925E-04 6613622E-04 145800E-06 122724E-07 1071407E-05
 4409082E-04 8818163E-06 1166400E-07 316300E+00

CASE NUMBER 740 GROUP NUMBER 1
 2828427E-01 5658854E-03 200000E-03 2828427E-03 1414214E-01 9428090E-00 2545584E-02 729000E-03
 333333E-00 5091169E-02 400000E-05 1131371E-06 583200E-04 600000E-01 291600E-08 666667E-02
 4714045E-00 8247893E-04 180000E-02 2061823E-04 1018234E-05 145800E-06 203648E-07 1649339E-05
 5091169E-04 1018234E-07 1166400E-07 337200E+00

CASE NUMBER 741 GROUP NUMBER 1
 3952847E-01 7905894E-03 200000E-03 3162278E-03 1581139E-01 1317616E-01 284650E-02 729000E-03
 333333E-00 7115125E-02 400000E-05 1581139E-06 583200E-04 600000E-01 291600E-08 666667E-02
 5270482E-00 5221202E-04 180000E-02 2881826E-04 1423025E-05 145800E-06 284650E-07 2305300E-05
 5492100E-04 1138420E-07 1166400E-07 360600E+00

CASE NUMBER 742 GROUP NUMBER 1
 5186152E-01 1028230E-04 200000E-03 3464102E-03 1732051E-01 1732051E-01 3117691E-02 729000E-03
 333333E-00 9353074E-02 400000E-05 2078461E-06 583200E-04 600000E-01 291600E-08 666667E-02
 5773503E-00 1910132E-05 180000E-02 3787893E-04 1870615E-05 145800E-06 3741230E-07 3030396E-05
 8235393E-04 1247077E-07 1166400E-07 298000E+00

CASE NUMBER 743 GROUP NUMBER 1
 5458113E-01 1081623E-04 200000E-03 3521363E-03 1760582E-01 1818937E-01 3159227E-02 729000E-03
 333333E-00 5824604E-02 400000E-05 2183245E-04 583200E-04 600000E-01 291600E-08 666667E-02
 5868939E-00 1028303E-05 180000E-02 3978965E-04 1864912E-05 145800E-06 3829842E-07 3183172E-05
 6338454E-04 1267591E-07 1166400E-07 394000E+00

CASE NUMBER 744 GROUP NUMBER 1
 5724334E-01 1144867E-04 200000E-03 3577709E-03 1788854E-01 1908111E-01 3219938E-02 729000E-03
 333333E-00 1030380E-03 400000E-05 2289734E-06 583200E-04 600000E-01 291600E-08 666667E-02
 5982848E-00 1043200E-05 180000E-02 4173040E-04 2060780E-05 145800E-06 4121520E-07 3378432E-05
 6439876E-04 1287975E-07 1166400E-07 400200E+00

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CASE NUMBER 745 GROUP NUMBER 1
 5994748E-01 1198950E-04 200000E-03 3633180E-03 1816590E-01 1998249E-01 3269667E-02 729000E-03
 333333E-00 1079055E-02 400000E-05 2397899E-04 583200E-04 600000E-01 291600E-08 666667E-02
 8053301E-00 1059435E-05 180000E-02 4370171E-04 2158109E-05 145800E-06 4316218E-07 3496137E-05
 6539725E-04 307945E-07 1166400E-07 406800E+00

CASE NUMBER 746 GROUP NUMBER 1
 6269280E-01 1251898E-04 200000E-03 3687818E-03 1843809E-01 2089761E-01 3319026E-02 729000E-03
 333333E-00 128472E-02 400000E-05 2507718E-06 583200E-04 600000E-01 291600E-08 666667E-02
 6146363E-00 1075368E-05 180000E-02 4570313E-04 2256844E-05 145800E-06 4513888E-07 3656250E-05
 6638072E-04 1327614E-07 1166400E-07 413100E+00

CASE NUMBER 747 GROUP NUMBER 1
 0 0 200000E-03 0 0 0 100000E-04
 3162278E-00 400000E-05 583200E-04 5692100E-01 400000E-08 6324555E-02
 0 0 180000E-02 0 200000E-06 0
 0 0 1166400E-07 260400E+00

CASE NUMBER 748 GROUP NUMBER 1
 333333E-00 7071068E-02 200000E-03 1414214E-03 7071068E-00 1178034E-00 1272782E-02 100000E-04
 3162278E-00 636384E-01 400000E-05 1414214E-05 583200E-04 600000E-01 291600E-08 6324555E-02
 226060E-00 4122847E-04 180000E-02 3335334E-03 1272782E-04 200000E-06 2545584E-06 2061823E-04
 2545584E-04 5091169E-06 1166400E-07 283800E+00

CASE NUMBER 749 GROUP NUMBER 1
 100000E-01 200000E-03 200000E-03 200000E-03 100000E-01 3162278E-00 180000E-02 100000E-04
 3162278E-00 180000E-02 400000E-05 400000E-05 583200E-04 5692100E-01 400000E-08 6324555E-02
 360000E-04 720000E-06 1166400E-07 303800E+00

CASE NUMBER 750 GROUP NUMBER 1
 183717E-01 3674235E-03 200000E-03 2448490E-03 122474E-01 6209475E-00 220454E-02 100000E-04
 3162278E-00 330681E-02 400000E-05 724846E-05 583200E-04 5692100E-01 400000E-08 6324555E-02
 3872993E-00 7142712E-04 180000E-02 1837117E-04 6613622E-04 200000E-06 122724E-07 1071407E-05
 4409082E-04 8818163E-06 1166400E-07 323300E+00

CASE NUMBER 751 GROUP NUMBER 1
 2828427E-01 5658854E-03 200000E-03 2828427E-03 1414214E-01 8944272E-00 2545584E-02 100000E-04
 3162278E-00 5091169E-02 400000E-05 1131371E-06 583200E-04 5692100E-01 400000E-08 6324555E-02
 487138E-00 8247893E-04 180000E-02 2828427E-04 1018234E-05 200000E-06 203648E-07 1649339E-05
 5091169E-04 1018234E-07 1166400E-07 345100E+00

CASE NUMBER 752 GROUP NUMBER 1
 3952847E-01 7905894E-03 200000E-03 3162278E-03 1581139E-01 1350000E-01 284650E-02 100000E-04
 3162278E-00 7115125E-02 400000E-05 1581139E-06 583200E-04 5692100E-01 400000E-08 6324555E-02
 500000E-00 5221202E-04 180000E-02 2832847E-04 1423025E-05 200000E-06 284650E-07 2305300E-05
 5492100E-04 1138420E-07 1166400E-07 370400E+00

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DATA INPUT
CASE NUMBER 753 GROUP NUMBER 1
5186152E+01 1039230E+04 2000000E+03 3484102E+03 1732051E+01 180148E+01 3117891E+02 1000000E+04
2162278E+00 9353078E+02 4000000E+05 2078481E+08 5832000E+04 5892100E+01 4000000E+08 8324555E+02
5477226E+00 1010132E+05 1800000E+02 5196152E+04 1870615E+05 2000000E+06 3741230E+07 3030396E+05
8235383E+04 1247077E+07 1166400E+07 3988000E+00
CASE NUMBER 754 GROUP NUMBER 1
5458113E+01 1091623E+04 2000000E+03 3521363E+03 1760682E+01 1726007E+01 3169227E+02 1000000E+04
2162278E+00 9324804E+02 4000000E+05 2183245E+08 5832000E+04 5892100E+01 4000000E+08 8324555E+02
5567784E+00 1026830E+05 1800000E+02 5458113E+04 1964921E+05 2000000E+06 3829842E+07 3183172E+05
8338454E+04 1267891E+07 1166400E+07 4062000E+00
CASE NUMBER 755 GROUP NUMBER 1
0 0 2000000E+030 0 0 0 0 1728000E+04
2886751E+000 4000000E+050 5832000E+04 5196152E+01 6912000E+08 5773503E+02
0 0 1800000E+020 0 0 3456000E+060 0
0 0 1166400E+07 2668000E+00
CASE NUMBER 756 GROUP NUMBER 1
3535534E+00 7071068E+02 2000000E+03 1414214E+03 7071068E+00 1022621E+00 1272792E+02 1728000E+04
2886751E+00 6363961E+01 4000000E+05 1414214E+03 5832000E+04 5196152E+01 6912000E+08 5773503E+02
2041241E+00 4123847E+04 1800000E+02 8108403E+03 1272792E+04 3456000E+06 2545584E+06 2061923E+04
2545584E+04 5091169E+06 1166400E+07 2922000E+00
CASE NUMBER 757 GROUP NUMBER 1
1000000E+01 2000000E+03 2000000E+03 2000000E+03 1000000E+01 2886751E+00 1800000E+02 1728000E+04
2886751E+00 1800000E+02 4000000E+05 4000000E+05 5832000E+04 5196152E+01 6912000E+08 5773503E+02
2886751E+00 5832000E+04 1800000E+02 1728000E+04 3600000E+04 3456000E+06 7200000E+06 5832000E+04
3600000E+04 7200000E+06 1166400E+07 3157000E+00
CASE NUMBER 758 GROUP NUMBER 1
1837117E+01 3674235E+03 2000000E+03 2449480E+03 1224745E+01 5303301E+00 2204541E+02 1728000E+04
2886751E+00 3304811E+02 4000000E+05 7348489E+05 5832000E+04 5196152E+01 6912000E+08 5773503E+02
3535534E+00 7142712E+04 1800000E+02 3174538E+04 6613822E+04 3456000E+06 1322724E+07 1071407E+05
4498082E+04 8818163E+06 1166400E+07 3369000E+00
CASE NUMBER 759 GROUP NUMBER 1
2828427E+01 5658858E+03 2000000E+03 2828427E+03 1414214E+01 8164866E+00 2545584E+02 1728000E+04
2886751E+00 5091169E+02 4000000E+05 1131371E+06 5832000E+04 5196152E+01 6912000E+08 5773503E+02
4082482E+00 8247693E+04 1800000E+02 4887522E+04 1018234E+05 3456000E+06 2036488E+07 1649539E+05
5091169E+04 1018234E+07 1166400E+07 3613000E+00
CASE NUMBER 760 GROUP NUMBER 1
3952847E+01 7905694E+03 2000000E+03 3162278E+03 1581139E+01 1141089E+01 2846050E+02 1728000E+04
2886751E+00 7115125E+02 4000000E+05 1581139E+06 5832000E+04 5196152E+01 6912000E+08 5773503E+02
4546355E+00 9221202E+04 1800000E+02 6830520E+04 1423025E+05 3456000E+06 2846050E+07 2305300E+05
5892100E+04 1728420E+07 1166400E+07 3897000E+00

TRANSGENERATED
DATA INPUT
CASE NUMBER 761 GROUP NUMBER 1
4192374E+01 8384748E+03 2000000E+03 3224903E+03 1612452E+01 1210234E+01 2902413E+02 1728000E+04
2886751E+00 7548273E+02 4000000E+05 1678950E+06 5832000E+04 5196152E+01 6912000E+08 5773503E+02
4659797E+00 9403817E+04 1800000E+02 7244422E+04 1509255E+05 3456000E+06 3018509E+07 2444933E+05
5804826E+04 1160986E+07 1166400E+07 2858000E+00
CASE NUMBER 762 GROUP NUMBER 1
0 0 2000000E+030 0 0 0 0 3048625E+04
2626129E+000 4000000E+050 5832000E+04 4727032E+01 1219450E+09 5252257E+02
0 0 1800000E+020 0 0 6097250E+060 0
0 0 1166400E+07 2785000E+00
CASE NUMBER 763 GROUP NUMBER 1
3535534E+00 7071068E+02 2000000E+03 1414214E+03 7071068E+00 9284767E+01 1272792E+02 3048625E+04
2626129E+00 6363961E+01 4000000E+05 1414214E+03 5832000E+04 4727032E+01 1219450E+09 5252257E+02
1858953E+00 4123847E+04 1800000E+02 1077853E+04 1272792E+04 6097250E+06 2545584E+06 2061923E+04
2545584E+04 5091169E+06 1166400E+07 3034000E+00
CASE NUMBER 764 GROUP NUMBER 1
1000000E+01 2000000E+03 2000000E+03 2000000E+03 1000000E+01 2626129E+00 1800000E+02 3048625E+04
2626129E+00 1800000E+02 4000000E+05 4000000E+05 5832000E+04 4727032E+01 1219450E+09 5252257E+02
2626129E+00 5832000E+04 1800000E+02 3048625E+04 3600000E+04 6097250E+06 7200000E+06 5832000E+04
3600000E+04 7200000E+06 1166400E+07 3299000E+00
CASE NUMBER 765 GROUP NUMBER 1
1837117E+01 3674235E+03 2000000E+03 2449480E+03 1224745E+01 4824508E+00 2204541E+02 3048625E+04
2626129E+00 3304811E+02 4000000E+05 7348489E+05 5832000E+04 4727032E+01 1219450E+09 5252257E+02
3218338E+00 7142712E+04 1800000E+02 5400682E+04 6613822E+04 6097250E+06 1322724E+07 1071407E+05
4498082E+04 8818163E+06 1166400E+07 3538000E+00
CASE NUMBER 766 GROUP NUMBER 1
2022859E+01 4047715E+03 2000000E+03 2529822E+03 1284911E+01 5314911E+00 2276840E+02 3048625E+04
2626129E+00 3642944E+02 4000000E+05 8095431E+05 5832000E+04 4727032E+01 1219450E+09 5252257E+02
3321819E+00 7378961E+04 1800000E+02 6169882E+04 7289888E+04 6097250E+06 1457178E+07 1180314E+05
4553800E+04 9187380E+06 1166400E+07 3595000E+00
CASE NUMBER 767 GROUP NUMBER 1
2518558E+01 4433058E+03 2000000E+03 2607681E+03 1303800E+01 5208900E+00 2346813E+02 3048625E+04
2626129E+00 3989752E+02 4000000E+05 8866175E+05 5832000E+04 4727032E+01 1219450E+09 5252257E+02
3424053E+00 7603988E+04 1800000E+02 6757365E+04 7078904E+04 6097250E+06 1895801E+07 1292680E+05
4693828E+04 9387651E+06 1166400E+07 3647000E+00
CASE NUMBER 768 GROUP NUMBER 1
2414953E+01 4829907E+03 2000000E+03 2683282E+03 1341641E+01 6341978E+00 2414953E+02 3048625E+04
2626129E+00 4348918E+02 4000000E+05 9699148E+05 5832000E+04 4727032E+01 1219450E+09 5252257E+02
3523212E+00 7824448E+04 1800000E+02 7182287E+04 8892822E+04 6097250E+06 1728786E+07 1408401E+05
4829907E+04 9659814E+06 1166400E+07 3701000E+00

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FRIDAY, JUL 2, 1976

TRANSGENERATED

DATA INPUT

CASE NUMBER	769	GROUP NUMBER							
261895E-01	523783E-03	2000000E-03	2756810E-03	1378405E-01	8977750E-00	2481128E-02	3048625E-04		
2626128E-00	4714145E-02	4000000E-05	1047588E-04	5832000E-04	4727032E-01	219450E-08	5252257E-02		
3619848E-00	8018857E-04	1800000E-02	7884255E-04	8428288E-04	6087250E-06	1886658E-07	1527383E-05		
4562258E-04	8824515E-06	1166400E-07	3757000E-00						
CASE NUMBER	770	GROUP NUMBER							
2828427E-01	5656854E-03	2000000E-03	2828427E-03	1414214E-01	7427814E-00	2545584E-02	3048625E-04		
2626128E-00	5081168E-02	4000000E-05	1131371E-06	5832000E-04	4727032E-01	219450E-08	5252257E-02		
3713907E-00	8247693E-04	1800000E-02	8622814E-04	1018234E-05	6087250E-06	2036468E-07	1649528E-05		
5081168E-04	1018234E-07	1166400E-07	3814000E-00						

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A P P E N D I X B
ANALYSIS OF COVARIANCE COMPUTER PROGRAM LISTING

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This section contains the FORTRAN source listings for program BMD04V and its associated subroutines, presented in the following order:

PROGRAM BMD04V

Subroutines

MINV

GRSPSEL

PATTY2

TG41

TPWD

WRT

LDAY

CONF

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PROGRAM BMD04V (INPUT, OUTPUT, TAPE4, TAPES=INPUT, TAPES=OUTPUT, TAPE1,
CTAPE2, TAPE3, TAPE7, TAPES, TAPES)
C
C BMD04V 00000000
C THIS IS A SIFTED VERSION OF BMD04V ORIGINALLY WRITTEN IN 00000020
C FORTRAN II. SOME MODIFICATIONS WERE MADE TO MAKE IT OPERABLE 00000030
C AND SLIGHTLY MORE EFFICIENT THAN THE SIFTED VERSION. 00000040
C 00000050
C CODE=PROBLEM IDENTIFICATION 00000060
C KVF=NO. OF VARIABLE FORMAT CARDS 00000070
C LYNN=NO. OF TREATMENT DEFINITION CARDS 00000080
C NADD=NO. OF VARIABLES TO BE ADDED AFTER TG 00000090
C NCARD=NO. OF CARDS/CASE 00000100
C NCASE=NO. OF CASES 00000110
C NCOV=NO. OF COVARIATES 00000120
C NDV=NO. OF THE DEPENDENT VARIABLE 00000130
C NGRPS=NO. OF TREATMENT GROUPS 00000140
C NTAPE=LOGICAL TAPE NO FOR INPUT DATA 00000150
C NTG=NO. OF TG CARDS 00000160
C REP=REPROCESS SAME DATA MATRIX 00000170
C
C REAL NCODE, NAMES, KKK 00000185
C DOUBLE PRECISION I, DB, DE, DT 00000190
C DIMENSION NAMES(36), KKK(100), TMP(8), INDX(8), WHEN(3) 00000190
C DIMENSION NEW(99), JUMP(99), NA(99), BN(99), NSAM(99), PNT(80), 00000200
C /DATA(100), NSUB(99, 6), CDNT(99, 6), REL(99, 6), OPER(99, 6), NG(99), X(36), 00000210
C SSVAR(99, 36), TOTXX(36, 36), TOTXY(36), TRXX(36, 36), TRXY(36), 00000220
C ZERRX(36, 36), ERRRY(36), LLL(36), B(35), C(25), D(35), 00000230
C SEB(35), SEC(35), SED(35), ADY(99), SEADY(99), A(99), SS(99), YY(99)
C 5, INDX(100), INDX2(36), IX(8), Z(122), IY(25), IZ(35)
C 6, ERRCC(36, 36), TRCCC(36, 36), TOTCC(36, 36), MCG(99), SDWG(99), VMC(99)
C COMMON DATA NSUB, CONT, REL, OPER, NG 00000270
C COMMON LH, NEW, JUMP, NA, BN, IERROR 00000280
C COMMON MVAR, NTG, NCASE 00000290
C COMMON /MT/A, B, C, D, SEB, SEC, SED, SSVAR, ADY, SEADY, YAC, WHEN
C SERI(1), X(1), X(1), 414213562)**2)-(X(1), 917120593)**3)
C +((X(2), 213383939)**4)+(X(2), 605171081)**5)+(X(2), 993795168)**6)
C 2+((X(2), 280015161)**7)+(X(2), 7843506)**8)+(X(2), 147168272)**9)
C 3+((X(4), 528728687)**10)+(X(4), 908228779)**11)+(X(4), 288851984)**12)
C 4+((X(5), 567601177)**13)+(X(5), 045855167)**14)+(X(5), 423424746)**15)
C 5+((X(6), 800466801)**16)+(X(6), 77027252)**17)+(X(6), 553183862)**18)
C 6+((X(7), 928946849)**19)+(X(7), 304361204)**20)+(X(7), 679457224)**21)
C 5 FORMAT('MI')
C 3 FORMAT('MI, I05X, 3A10')
102 FORMAT(' BMD04V - ANALYSIS OF COVARIANCE - MULTIPLE COVARIATES - R00000300
REVISED OCTOBER 2, 1978')
23M HEALTH SCIENCES COMPUTING FACILITY, UCLA (NADC REVIS)
30M JULY 2, 1978 W.J. FRANK (1/7)
WRITE(6, 5)
ITAPE=2 00000330
REWIND ITAPE 00000340
IT3=3 00000350
NTAPE=5 00000360
JTAPE=7
DATA A124/ENFINISH, A125/SHSAMSIZ, A126/SHORPDEF, A121/SHRNGEN/00000370
1, A421/SHCVSEL, A521/SHLAB, P123/SHPROBLM/ 00000380
DATA A123/SHYES/
CALL LDAY(WHEN)
999 READ (5, 100) TODE, CODE, NGRPS, NCASE, NCARD, NCOV, NADD, NDV, OUT, INAM, REP/00000400
1, LYNN, WRES, TRES, VAR, SSQ, MCON, CORR, FCAST, REW, NTG, MTAPE, KVF
NITP=0 00000420
C
C IF(TODE .NE. A124) GO TO 1 00000430
C 2 IF(NTAPE .E. 5) GO TO 4 00000440
C REWIND NTAPE 00000450
C 4 STOP 00000460
C 1 REWIND 8
C REWIND 9
C WRITE(6, 3) WHEN
C Z000=0
C IF(TODE .NE. P123) GO TO 446 00000480
C IF(MCONP.LE.0) GO TO 436 00000490
C IF(NCOV.LT.2) GO TO 494 00000500
C GO TO 400 00000510
C 446 WRITE (6, 444) Z000, TODE 00000520
C 444 FORMAT('NO. 66 60H CARD EXPECTED. THE FIRST SIX COLUMNS OF THE CARD 00000530
C READ WERE :A4)
C GO TO 2 00000540
C 441 WRITE (6, 444) 00000550
C 441 FORMAT('40H ILLEGAL NUMBER OF TRANSGENERATION CARDS) 00000560
C GO TO 2 00000570
C 1441 WRITE(6, 2441) 00000580
C 2441 FORMAT('31H0PROBLEM HAS TOO MANY VARIABLES) 00000590
C GO TO 2 00000600
C 1442 WRITE(6, 2442) 00000610
C 2442 FORMAT('40H ILLEGAL NUMBER IN COL. 24-26 ON PROBLM CARD.) 00000620
C GO TO 2 00000630
C 448 WRITE(6, 448) 00000640
C 448 FORMAT('55H0VIOLATING EITHER RULE(2) OR RULE(5) ON PAGE 525 OF BMD) 00000650
C GO TO 2 00000660
C 491 WRITE(6, 491) 00000670
C 491 FORMAT('41H0NUMBER OF GROUP DEFINITION CARDS ILLEGAL) 00000680
C GO TO 2 00000690
C 496 WRITE(6, 496) 00000700
C 496 FORMAT('25H0ILLEGAL NUMBER OF VARIATES READ IN) 00000710
C GO TO 2 00000720
C 456 WRITE(6, 456) 00000730
C 456 FORMAT('35H0ILLEGAL NUMBER OF TREATMENT GROUPS) 00000740
C GO TO 2 00000750
C 443 WRITE (6, 443) 00000760
C 443 FORMAT('60H0THE NUMBER OF THE INPUT TAPE CANNOT BE 2 OR 3 00000770
C GO TO 2 00000780
C 1440 WRITE(6, 2440) I1 00000790
C 2440 FORMAT('64H0PROBLEM HAS TOO MANY VARIABLES FOR THE NUMBER OF CASES
C IN GROUP.)
C GO TO 2
C 401 WRITE (6, 403) 00000800
C GO TO 2 00000810
C 400 WRITE (6, 102) 00000820
C BACKSPACE 5
C READ (5, 114) (S(I), J=1, 8)
C WRITE (6, 98) (S(I), J=1, 8)
C 98 FORMAT('2, 8A10, /)
C WRITE (6, 103) CODE, NGRPS, NCASE, NCARD, NCOV, NADD, NDV, OUT, INAM, REP, LY00000830
C WRES, WRES, VAR, CORR, FCAST, REW, NTG, MTAPE, KVF
C IF (NCOV=NADD) NCOV=NADD+100, GE, 01 GO TO 1441 00000850
C IF (NADD = 98) NADD = 25, GE, 01 GO TO 1442 00000860
C IF (NTAPE=ITAPE) NITAPE=173, GE, 01 GO TO 443 00000870
C IF (REW.EQ.A123) CALL TPD(NTAPE, MTAPE)
C MVAR=NCOV 00000890
C IJ3=0 00000900
C REWIND I3 00000910

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REWIND JTape
IERROR=0
00 332 I=1.99
332 DATA(I)=0.0
00 333 I=1.36
NAMES(I)=0
INDEX1(I)=0
333 INDEX2(I)=0
LH=NVAR+1+RADD
C
NVAR=LH-1
LH=NVAR
IF(LH.GE.38.OR.LH.LE.2)GO TO 1441
IF(KVF.GT.0.AND.KVF.LE.10)GO TO 410
WRITE (6,9999)
KVF = 1
410 ASSIGN 50 TO NSKIP
IF(NTG) 441,10,11
11 ASSIGN 48 TO NSKIP
IF(NTG.GT.99) GO TO 441
ZQQQ=4221
00 411 I=1,NTG
READ (5,106)TODE,NEW(I),JUMP(I),NA(I),BH(I)
IF(TODE.NE.A321) GO TO 446
IF(MOD(I,50).NE.1)GO TO 12
WRITE(6,3) WHEN
WRITE (6,104)
WRITE (6,105)
12 WRITE (6,107)I,NEW(I),JUMP(I),NA(I),BH(I)
IF((JUMP(I)-19)+JUMP(I)-19)+JUMP(I)-401.EQ. 0) GO TO 4115
IF(JUMP(I)-4114)11,411,4115
4111 IF((JUMP(I)-25)+(39-JUMP(I)) .LT. 0) GO TO 411
4115 WRITE (6,150)I
LYNN=99
411 CONTINUE
10 IF(LYNN)491,14,13
13 WRITE(6,3) WHEN
WRITE (6,110)
I=0
DATA STAR/4H
00 21 I=1,LYNN
READ (5,111)TODE,NG(I),NSUB(I,J),REL(I,J),CONT(I,J),OPER(I,J),J=
1,6)
ZQQQ=4126
IF(TODE.NE.A126) GO TO 446
00 16 LG=1,6
IF(OPER(I,LL).NE.STAR)GO TO 16
IX=LL-3
IJ=I+IX
GO TO 18
16 CONTINUE
18 IF(IJ.LE.50)GO TO 19
I=IX
WRITE(6,3) WHEN
WRITE (6,110)
19 WRITE (6,112)NG(I)
00 22 J=1,6
WRITE (6,113)NSUB(I,J),REL(I,J),CONT(I,J),OPER(I,J)
IF(OPER(I,J) .EQ. STAR) GO TO 21
22 CONTINUE
21 CONTINUE
00001250
00001260
00001270
00001280
00001290
00001300
00001310
00001320
00001340
00001350
00001360
00001370
00001380
00001390
00001400
00001410
00001420
00001430
00001440
00001450
00001470
00001480
00001490
00001500
00001510
00001520
00001530
00001540
00001550
00001560
00001570
00001580
00001590
00001600
00001620
00001640
00001660
00001670
00001680
00001690
00001700
00001710
00001720
00001730
00001750
00001760
00001770
00001780
00001790
00001800
00001810
00001820
GO TO 15
14 NCARDS=(NCRPS+21)/22
N2=0
WRITE (6,3) WHEN
WRITE (6,155)
00 1450 J=1,NCARDS
N1=N2-1
N2=N2+22
IF(N2.LE.99) GO TO 1430
N2=99
1430 READ (5,108)TODE,(NSAM(I),I=1,N2)
WRITE (6,157)TODE,(NSAM(I),I=1,N2)
BACKSPACE 5
READ (5,108)TODE,(NSAM(I),I=1,N2)
ZQQQ=4125
IF(TODE.NE.A125) GO TO 446
1450 CONTINUE
15 IF(INAM)401,17,501
501 N1=0
WRITE(6,3) WHEN
WRITE(6,125)
503 READ(5,504)TODE,(INDX(I),TMP(I),I=1,7)
504 FORMAT(1X,3X,7(1X,A8))
IF(TODE.NE.A52)GO TO 446
00 505 I=1,7
IF(INDX(I).EQ.0)GO TO 505
N1=N1+1
INDEX1(N1)=INDX(I)
KKK(N1)=TMP(I)
505 CONTINUE
BACKSPACE 5
READ(5,506)INDX(I),I=1,7)
WRITE(6,126)(INDX(I),TMP(I),I=1,7)
506 FORMAT(1X,7(1X,A8))
IF(N1.LT.INAM)GO TO 503
17 KVF=KVP*8
WRITE(6,3) WHEN
WRITE(6,1090)
READ (5,114)FPNT(I),I=1,KVF)
WRITE(6,2091)FPNT(I),I=1,KVF)
FORMAT(1X,8A10)
209 IF( REP .EQ. A123) GO TO 37
K1=NCARD*NCASE
K173=1
IF(NTAPE.NE.5) GO TO 3777
00 35 I=1,K1
READ (NTAPE,114) (IX(I),J=1,8)
35 WRITE (173,114) (IX(I),J=1,8)
END FILE ITS
ELAST=ITS
37 NTAPE=ELAST
3777 K17P=K173
IF(K17P.EQ.0) GO TO 38
REWIND NTape
38 IF(LYNN .GT. 0) GO TO 28
K17P=1
K17P=1
00 27 I=1,NCRPS
N1=NSAM(I)
00 27 J=1,N1
00001830

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READ (NTAPE,FMT)(DATA(K),K=1,NVAR)          00001830
DATA(100)=1                                  00001840
WRITE(ITAPE)(DATA(K),K=1,NVAR),DATA(100)
27 CONTINUE                                  00001860
GO TO 28                                     00001870
26 DO 29 I=1,99                               00001880
29 NSAM(I)=0                                  00001890
KNTP=1                                         00001900
DO 30 I=1,NCASE                               00001910
DATA(100)=0                                    00001920
READ (NTAPE,FMT)(DATA(J),J=1,NVAR)          00001930
DO 31 J=1,LYNN                                00001940
CALL GRPSEL(J)                                00001950
IF(IJ.GT.0) GO TO 299                          00001970
READ (5,15)KODE,MCO                            00001980
IF(MTP.EQ.0) GO TO 88                          00001990
REWIND ITAPE                                  00002000
88 IF(MCO.GE.33) GO TO 899                      00002010
READ (5,15)KODE                                00002020
GO TO 999                                       00002030
299 IF(DATA(100).LE.0) GO TO 31                00002040
KK=NC(J)                                       00002050
NSAM(KK)=NSAM(KK)+1                            00002060
NITP=NITP+1                                    00002070
WRITE(ITAPE)(DATA(K),K=1,NVAR),DATA(100)
GO TO 30                                       00002090
31 CONTINUE                                  00002100
30 CONTINUE                                  00002110
28 END FILE ITAPE                              00002120
REWIND ITAPE                                  00002130
REWIND ITAPE
IF(LYNN.LE.0) GO TO 43                          00002140
JJ=0                                           00002150
DO 39 I=1,99                                   00002160
39 NG(I)=0                                       00002170
DO 40 I=1,99                                   00002180
IF(NSAM(I).LE.0) GO TO 40                      00002190
JJ=JJ+1                                        00002200
NG(JJ)=NSAM(I)                                00002210
NSAM(I)=JJ                                     00002220
40 CONTINUE                                  00002230
J=MAXO(JJ,NGRPS)                              00002240
NGRPS=JJ                                       00002250
J=0
DO 45 I=1,JX                                  00002270
MNG=0
IF(NSAM(I).EQ.0) GO TO 41                      00002280
J=J+1
MNG=MNG(I)
41 IF(MOD(I,50).NE.1) GO TO 45                00002290
WRITE(6,3) WHEN                                00002300
WRITE (6,115)                                  00002310
45 WRITE (6,116) NSAM(I),MNG                    00002320
GO TO 252                                       00002330
43 DO 251 I=1,NGRPS                            00002340
251 NG(I)=NSAM(I)                              00002350
252 NVAR=NVAR+NADD                             00002360
NCDV=NCDV+NADD-1                             00002370
DO 46 I=1,NVAR                                00002380
TOTEX(I)=0.0                                  00002390
TREXY(I)=0.0                                  00002400
ERRRY(I)=0.0                                  00002410
DO 46 J=1,NVAR                                00002420
TOTEX(I,J)=0.0                                00002430
TREXY(I,J)=0.0                                00002440
46 ERRZY(I,J)=0.0                              00002450
DO 47 I=1,NGRPS                                00002460
47 SSVAR(I)=0.0
ASSIGN 480 TO MUD
READ (5,152)TODE,MCO,(INDEX2(I),I=1,35)
ZQQQ=AA21                                       00002500
IF(TODE.NE.AA21) GO TO 446                      00002510
WRITE(6,3) WHEN
WRITE (6,154)
WRITE (6,153)TODE,MCO,(INDEX2(I),I=1,35)
BACKSPACE 5
READ (5,151)MCO,(INDEX2(I),I=1,35)
IF(MCO.LE.32) GO TO 38
READ (5,152)TODE,(INDEX2(I),I=33,35)
IF(TODE.NE.AA21) GO TO 446
WRITE (6,153)TODE,(INDEX2(I),I=33,35)
BACKSPACE 5
READ (5,151)MCO,(INDEX2(I),I=33,35)
38 MCO=MCO
DO 44 I=1,MCO
IF(INDEX2(I).LE.0) MCO=MCO-1
44 CONTINUE
MCO=MCO
IF(MCO.GT.35.OR.(NGRPS=MCO+1).GT.NCASE) GO TO 448 00002520
NCDV=MCO                                       00002540
NVAR=MCO+1                                     00002550
INDEX2(NVAR)=NDV                               00002560
IF(OUT.NE.A123) GO TO 475                      00002570
ASSIGN 417 TO MUD                               00002580
MESS=0
LL=0
IJ=50/INCARD+1
IF(IJ.LE.0) IJ=1
WRITE(6,3) WHEN
WRITE (6,415)                                  00002700
NITP=1                                         00002710
475 DO 48 II=1,NGRPS                            00002720
LG=NG(II)                                       00002730
DO 48 M=1,LG                                    00002740
READ(ITAPE)(DATA(L),L=1,LR),DATA(100)
GO TO MUD,(490,417)                             00002760
417 MESS=MESS+1                                 00002770
K=DATA(100)
LL=LL+1
IF(LL.LE.IJ) GO TO 51
LL=1
WRITE(6,3) WHEN
WRITE (6,415)
51 WRITE (6,418)MESS,K
DO 52 L=1,NCARD
READ (NTAPE,(14)I(I)K,K=1,8)
52 WRITE (6,250)I(I)K,K=1,8)
50 GO TO NSRIP,(49,50)
49 CALL TGA(III,M)
00002800
00002810

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50 K=DATA(100)
WRITE(JTAPE)(DATA(INDEX2(JJ)),JJ=1,NVAR),DATA(100)
00002820
IF(LYNN.GT.0)K=NSAM(K)
DO 48 J=1,NVAR
I=INDEX2(J)
SSVAR(K,J)=SSVAR(K,J)+DATA(I)
00002840
DO 48 N=1,NVAR
L=INDEX2(N)
00002850
TOTR(L,N)=TOTR(J,N)+(DATA(I)+DATA(L))
00002860
CONTINUE
00002870
48 REWIND JTAPE
END FILE JTAPE
00002880
REWIND JTAPE
00002890
NT=0
DO 54 I=1,NGRPS
00002910
LL=I
00002920
IF((NG(I)-NCOV(I)).LE.0)GO TO 1440
NT=NT+NG(I)
00002930
54 CONTINUE
00002940
DO 55 J=1,NVAR
00002950
X(J)=0.0
00002960
DO 55 I=1,NGRPS
00002970
55 X(J)+X(I)+SSVAR(I,J)/NT
00002980
BIG=NT
00002990
DO 58 J=1,NVAR
00003000
TOTR(J,J)=TOTR(J,J)+BIG*X(I)*X(J)
00003010
DO 58 N=1,NGRPS
00003020
T=NG(N)
00003030
TRER(J,J)+TRER(I,J)+(SSVAR(I,J)+SSVAR(K,J))/T
00003040
CONTINUE
00003050
TRER(J,J)+TRER(I,J)+BIG*X(I)*X(J)
00003060
58 ERER(J,J)+TOTR(I,J)-TRER(I,J)
00003080
DO 59 I=1,NGRPS
00003090
D(I)=NG(I)
00003100
DO 59 J=1,NVAR
00003110
59 SSVAR(I,J)+SSVAR(I,J)/D(I)
00003120
LL=0
IK=NVAR/6
IF(NVAR-INK).GT.0)IK=IK+1
I=90/(2+IK+1)
IF(I).LE.0)I=1
WRITE(6,3) WHEN
WRITE(6,117)
DO 63 L=1,NVAR
00003130
LL=LL+20*I
00003140
I=INDEX2(LL)
00003150
DO 615 J=1,IK*N
00003160
IF(I.EQ.INDEX1(J))GO TO 625
00003170
CONTINUE
00003180
NITP=1
00003190
WRITE(JTAPE,888)
00003200
REWIND JTAPE
00003210
READ(JTAPE,777)NAMES(1)
00003220
REWIND JTAPE
00003230
GO TO 61
00003240
625 NAMES(1)=X(I)
00003250
61 CONTINUE
00003260
DO 60 I=1,NGRPS
00003270
LL=LL+1

IF(LL.LE.I)GO TO 53
LL=1
WRITE(6,3) WHEN
WRITE(6,117)
53 WRITE(6,118)
60 WRITE(6,119)LL,LL,I,NAMES(I),SSVAR(I,J),J,I,NVAR)
WRITE(6,3) WHEN
WRITE(6,70)
DO 69 I=1,NVAR
69 WRITE(6,71)NAMES(I),X(I)
IF(PCAST.EQ.8)23)GO TO 99
IF(CORR.NE.8)23)GO TO 120
DO 129 I=1,NVAR
DO 129 J=1,NVAR
TOTCC(I,J)=0
TRCC(I,J)=0
ERRCC(I,J)=0
TOT+TOTR(I,J)+TOTR(I,J)
TR+TRER(I,J)+TRER(I,J)
ERR+ERRR(I,J)+ERRR(I,J)
IF(TOT.LE.0)GO TO 128
TOTCC(I,J)+TOTR(I,J)/SORT(TOT)
128 IF(TR.LE.0)GO TO 125
TRCC(I,J)+TRER(I,J)/SORT(TRA)
125 IF(ERR.LE.0)GO TO 129
ERRCC(I,J)+ERRR(I,J)/SORT(ERR)
CONTINUE
WRITE(6,3) WHEN
WRITE(6,127)
WRITE(6,121)
CALL PATTY2(TOTCC,NVAR,NAMES,1)
WRITE(6,3) WHEN
WRITE(6,127)
WRITE(6,123)
CALL PATTY2(ERRCC,NVAR,NAMES,1)
130 WRITE(6,3) WHEN
WRITE(6,120)
WRITE(6,121)
CALL PATTY2(TOTR,NVAR,NAMES,1)
WRITE(6,3) WHEN
WRITE(6,120)
WRITE(6,122)
CALL PATTY2(TRA,NVAR,NAMES,1)
WRITE(6,3) WHEN
WRITE(6,120)
WRITE(6,122)
CALL PATTY2(ERRR,NVAR,NAMES,1)
DO 64 I=1,NVAR
TOTV(I)=TOTR(I,NVAR)
TRV(I)=TRER(I,NVAR)
ERRV(I)=ERRR(I,NVAR)
64 TOTV+TOTV/NVAR
TRV+TRV/NVAR
ERRV+ERRV/NVAR
K=0
DO 72 I=1,NCOV
DO 72 J=1,NCOV
K=K+1
72 Z(I)=DBLE(TOTR(K,I))
CALL MINV(Z,NCOV,DT,LY,IZ)

```

```

K=0
00 73 I=1, NCOV
00 73 J=1, NCOV
K=K+1
73 TOTXX(J,1)=SHGL(Z(K))
K=0
00 74 I=1, NCOV
00 74 J=1, NCOV
K=K+1
74 Z(K)=DBLE(TREXX(J,1))
CALL MINVIZ, NCOV, DB, IV, IZ)
K=0
00 75 I=1, NCOV
00 75 J=1, NCOV
K=K+1
75 TREXX(J,1)=SHGL(Z(K))
K=0
00 76 I=1, NCOV
00 76 J=1, NCOV
K=K+1
76 Z(K)=DBLE(ERXX(J,1))
CALL MINVIZ, NCOV, DE, IV, IZ)
K=0
00 77 I=1, NCOV
00 77 J=1, NCOV
K=K+1
77 ERXX(J,1)=SHGL(Z(K))
WRITE(6,3) WHEN
WRITE (6,124)
WRITE (6,121)
00003480
00003500
CALL PATTY2(TOTXX, NCOV, NAMES, SHGL(DT))
WRITE(6,3) WHEN
WRITE (6,124)
00003520
00003530
WRITE (6,122)
CALL PATTY2(TREXX, NCOV, NAMES, SHGL(DB))
WRITE(6,3) WHEN
WRITE (6,124)
00003550
00003560
WRITE (6,123)
CALL PATTY2(ERXX, NCOV, NAMES, SHGL(DE))
00 85 I=1, NCOV
00003580
00003590
B(I)=0.0
00003600
C(I)=0.0
00003610
D(I)=0.0
00003620
00 85 J=1, NCOV
00003630
00003640
B(I)=B(I)+ERRXX(I,J)+ERRYY(J)
00003650
C(I)=C(I)+TOTXX(I,J)+TOTYY(J)
00003660
00003670
65 D(I)=D(I)+TREXX(I,J)+TREYY(J)
00003680
00003690
SSDTR=0.0
00003700
SSDTOT=0.0
00003710
SSDERR=0.0
00003720
00 86 I=1, NCOV
00003730
00003740
SSDERR=SSDERR+B(I)+ERRYY(I)
00003750
SSDTR=SSDTR+C(I)+TREYY(I)
00003760
66 SSDTOT=SSDTOT+C(I)+TOTYY(I)
00003770
00003780
SSDTR=SSDTR-SSDERR
00003790
SSATRE=TREYY-SSDTR
00003800
SSATOT=TOTYY-SSDTOT
00003810
SSAERR=ERRYY-SSDERR
00003820
N1=NGRPS-1
00003830
N2=BIG
00003840

N2=N2-NGRPS
00003850
N3=BIG-1.0
00003860
N4=N1
00003870
N5=N2-NCOV
00003880
N6=N3-NCOV
00003890
TEST=SSATOT-SSAERR
00003900
DN4=N4
00003910
DN5=N5
00003920
DN6=N6
00003930
DN7=N1
00003940
SMATRE=SSATRE/DN4
00003950
SMAERR=SSAERR/DN5
00003960
ADJTES=TEST/DN7
00003970
FTEST=ADJTES/SMAERR
00003980
SMATOT=SSATOT/DN6
00003990
CALL WRT(N1, N2, N3, N4, N5, N6, FREY, ERY, TOTYY, SSDERR, SSAERR, SMAERR,
+SSDTOT, SSATOT, TEST, FTEST, ADJTES, NCOV, SMATOT, BIG, NGRPS, NAMES, ERXX,
+TOTXX, TREXX, SMATRE, SSDTR, SSATRE)
99 00 604 I=1, NGRPS
VMG(I)=0.
SS(I)=0.
604 YY(I)=0.
VM=0.
VT=0.
VL=0.
00 601 I=1, NY
READ(J,ABE)(DATA(J), J=1, NVAR), DATA(100)
K=DATA(100)
IF(LYNN, GT, 0) K=NSAM(K)
ZEST=YAC
YEST=A(K)
00 600 J=1, NCOV
ZEST=ZEST+C(J)+DATA(J)
600 YEST=YEST+B(J)+DATA(J)
RES=DATA(NVAR)-YEST
RES1=DATA(NVAR)-ZEST
WRITE(6) RES
VMG(K)=VMG(K)+ABS(RES)
VM=VM+ABS(RES)
VT=VT+ABS(RES1)
PVAR=100.+RES/YEST
IF(ABS(RES).LE.VLIGO TO 592
VL=ABS(RES)
VVL=RES
VEST=YEST
PAR=PVAR
DAT=DATA(NVAR)
IA=I
IB=K
592 SS(K)=SS(K)+RES+RES)
YY(K)=YY(K)+((DATA(NVAR)-SSVAR(K, NVAR))
+DATA(NVAR)-SSVAR(K, NVAR)))
IF(WRES, NE, A123) GO TO 601
IF(MOD(I,50), NE, 1) GO TO 599
WRITE(6,3) WHEN
WRITE(6,596)
WRITE(6,602)
599 WRITE(6,602)H, DATA(NVAR), VEST, RES, PVAR, K
601 CONTINUE
ENDFILE 0

```

```

REWIND 8
WRITE(6,3) WHEN
WRITE(6,504)
WRITE(6,602)
WRITE(6,603)IA,DAT,VEST,VVL,PAR,;B
DO 508 I=1,NCRPS
508 VMG(I)=VMG(I)/FLOAT(NG(I)-1)
VM=VM/FLOAT(NT-1)
VT=VT/FLOAT(NT-1)
REWIND JTape
VVL=0
DO 608 J=1,NT
READ(JTape)(DATA(J),J+1,NVAR),DATA(100)
K=DATA(100)
IF(LVNH.GT.0) K=NSAM(K)
ZEST=K(K)
YEST=YAC
DO 609 J=1,NCOV
ZEST=ZEST+K(J)+DATA(J)
609 YEST=YEST+C(J)+DATA(J)
RES=DATA(NVAR)-YEST
RESI=DATA(NVAR)-ZEST
WRITE(9) RES
PVAR=100.*RES/YEST
IF(ABS(RES).LE.VL)GO TO 583
VL=ABS(RES)
VVL=RES
VEST=YEST
PAR=PVAR
DAT=DATA(NVAR)
IA=I
583 IF(TRES.NE.A123) GO TO 608
IF(MOD(I,50).NE.1)GO TO 610
WRITE(6,3) WHEN
WRITE(6,587)
WRITE(6,611)
610 WRITE(6,612)I,DATA(NVAR),YEST,RES,PVAR
608 CONTINUE
ENDFILE 8
REWIND 9
WRITE(6,3) WHEN
WRITE(6,585)
WRITE(6,611)
WRITE(6,612)IA,DAT,VEST,VVL,PAR
IF(MCOR.NE.A123)GO TO 634
WRITE(6,3) WHEN
IF((SSDERR/ERRVY).LT.0.)GO TO 632
SE=SQRT(SSDERR/ERRVY)
IF(SE.GT.1)GO TO 632
WRITE(6,627)SE
632 IF((SSDTOT/TOTVY).LT.0.)GO TO 632
ST=SQRT(SSDTOT/TOTVY)
IF(ST.GT.1)GO TO 632
WRITE(6,628)ST
633 WRITE(6,629)
DO 631 I=1,NCRPS
IF((SS(I)/VY(I)).GT.1)GO TO 631
SEM=SQRT(1.-SS(I)/VY(I))
IF(SEM.GT.1)GO TO 631
IF(MOD(I,50).NE.1)OR(.I.EQ.1)GO TO 626
WRITE(6,3) WHEN
WRITE(6,629)
626 WRITE(6,630)I,SEM
631 CONTINUE
634 LW=0
552 REWIND JTape
REWIND 8
REWIND 9
DO 551 I=1,NCRPS
NCG(I)=NG(I)
551 SDWG(I)=0.
SDW=0.
SDT=0.
NC=NT
ND=NT
DO 557 J=1,NT
READ(JTape)(DATA(J),J+1,NVAR),DATA(100)
K=DATA(100)
IF(LVNH.GT.0) K=NSAM(K)
READ(8) RES
READ(9) RESI
IF(VMG(K).LE.0.)GO TO 540
GS=SE*(RES/VMG(K))+RESI/VMG(K)
IF(GS.GT.12.5)GO TO 540
SG=SER(GS)/VMG(K)
SYG=EXP(GS)
GO TO 549
540 NCG(K)=NCG(K)-1
GO TO 550
549 SDWG(K)=SDWG(K)+(SYG/SD)
550 IF(VL.LE.0.)GO TO 541
SXX=SE*(RES/VMG(K))+RESI/VMG(K)
IF(SXX.GT.12.5)GO TO 541
SX=SER(SXX)/VMG(K)
SYX=EXP(SXX)
GO TO 554
541 NC=NC-1
GO TO 555
554 SDW=SDW+(SY/SX)
555 IF(VT.LE.0.)GO TO 542
SXX=SE*(RES/VT)+RESI/VT
IF(SXX.GT.12.5)GO TO 542
SX=SER(SXX)/VT
SYX=EXP(SXX)
GO TO 556
542 ND=ND-1
GO TO 557
556 SDT=SDT+(SY1/S4)
557 CONTINUE
DO 543 I=1,NCRPS
IF((NCG(I)).LE.0)OR(.ISDWG(I)).LE.0.)GO TO 543
VMG(I)=SE*(VMG(I)+ISDWG(I)/FLOAT(NCG(I)))
543 CONTINUE
IF((NC.LE.0)OR(.ISDW.LE.0.))GO TO 544
VM=SE*(VM+(ISDW/FLOAT(NC)))
544 IF((ND.LE.0)OR(.ISDT.LE.0.))GO TO 545
VT=SE*(VT+(ISDT/FLOAT(ND)))
545 LW=LW+1
IF(LW.LT.20)GO TO 552
WRITE(6,3) WHEN

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```

WRITE(6,30) VT
WRITE(6,30) VW
WRITE(6,30)
DO 613 1=1,NGRPS
IF((MOD(I,50).NE.1).OR.(I.EQ.1))GO TO 613
WRITE(6,3) WHEN
WRITE(6,30)
613 WRITE(6,30) 1,VNG(I)
IF((FCAST.EQ.A123).OR.(SSO.NE.A123))GO TO 614
DO 606 1=1,NGRPS
IF((MOD(I,50).NE.1))GO TO 614
WRITE(6,3) WHEN
WRITE(6,30)
614 X=YY(I)-SS(I)
IF(XA.LT.0)GO TO 606
IF((ING(I)-NCOV-1).GT.0)GO TO 617
WRITE(6,607)1,YY(I),XA,SS(I)
GO TO 606
617 X=SQRT(SS(I)/FLOAT(NG(I)-NCOV-1))
WRITE(6,607)1,YY(I),XA,SS(I),X
606 CONTINUE
618 NLIST=NLIST+1
REWIND JTAPE
IF(VAR.NE.A123)GO TO 621
WRITE(6,3) WHEN
WRITE(6,419)
MESS=0
LL=0
IK=NVAR/8
IF((NVAR-1)GT.0)IK=IK+1
L=50/(IK+2)
IF(L.LE.0)J=1
DO 620 1=1,NT
MESS=MESS+1
READ(JTAPE)(DATA(I),J=1,NVAR),DATA(100)
K=DATA(100)
IF(LYNN.GT.0)K=NSAM(K)
LL=LL+1
IF(LL.LE.IJ)GO TO 616
L=1
WRITE(6,3) WHEN
WRITE(6,419)
616 WRITE(6,418)MESS,K
620 WRITE(6,249)(DATA(I),J=1,NVAR)
621 WRITE(6,5)
GO TO 999
70 FORMAT(23H TABLE OF MEANS (TOTAL)//21H VARIABLE MEAN/)
71 FORMAT(3X,A4,3X,E13,7)
125 FORMAT(13H LABELS CARDS//)
126 FORMAT(13X,A4,A6)
127 FORMAT(19H-CORRELATION MATRIX)
594 FORMAT(///,26H MAXIMUM RESIDUAL (WITHIN))
595 FORMAT(///,25H MAXIMUM RESIDUAL (TOTAL))
596 FORMAT(///,28H TABLE OF RESIDUALS (WITHIN))
597 FORMAT(///,27H TABLE OF RESIDUALS (TOTAL))
602 FORMAT(///9H CASE NO.,6X,7HY VALUE,5X,10HY ESTIMATE,5X,8HRESIDUAL
1,3X,17HPERCENT VARIATION,2X,10HGROUP NO.,/)
611 FORMAT(///9H CASE NO.,6X,7HY VALUE,5X,10HY ESTIMATE,5X,8HRESIDUAL
1,3X,17HPERCENT VARIATION,/)
603 FORMAT(2X,15,4X,E13,7,1X,E13,7,1X,E13,7,5X,F9,2,9X,13)

612 FORMAT(2X,15,4X,E13,7,1X,E13,7,1X,E13,7,5X,F9,2)
605 FORMAT(///50H TABLE OF SUM-SQUARES AND STANDARD ERRORS (WITHIN)//61
1H TREATMENT VY SUM-SQUARES SUM-SQUARES STANDARD/59H
2 NO. (DUE) (ABOUT) ERROR./)
607 FORMAT(1X,15,3X,E13,7,1X,E13,7,1X,E13,7,1X,E13,7)
624 FORMAT(///,36H CORRELATION COEFFICIENT (TOTAL) P, E16,10)
624 FORMAT(///,36H CORRELATION COEFFICIENT (WITHIN) P, E16,10)
628 FORMAT(///,25H TREATMENT CORRELATION,/,25H NO. COEFFICIE
INT,/,16X,6H(WITHIN),/)
630 FORMAT(1X,15,6X,E16,10)
403 FORMAT(48HNEGATIVE NUMBER IS ILLEGAL FOR NUMBER OF LABELS)
1090 FORMAT(26HOTHE VARIABLE FORMAT CARDS/)
100 FORMAT(26,12,15,212,13,12,43,13,42,12,443,3X,443,312)
103 FORMAT(33H PROBLEM CODE.....A6/
1 33H NUMBER OF TREATMENT GROUPS.....16/
2 33H TOTAL NUMBER OF CASES.....16/
3 33H NUMBER OF CARDS PER CASE.....16/
4 33H NUMBER OF ENTERING VARIABLES.....16/
5 33H NUMBER OF VARIABLES ADDED.....16/
6 33H INDEX OF THE DEPENDENT VARIABLE.....16/
7 33H PRINT DATA INPUT.....3X,A3/
8 33H NUMBER OF VARIABLES NAMED.....16/
9 33H USE DATA CARDS OF LAST PROBLEM.....3X,A3/
0 33H NUMBER OF GROUP DEFINITION CARDS.....16/
1 33H PRINT RESIDUALS (WITHIN).....3X,A3/
2 33H PRINT RESIDUALS (TOTAL).....3X,A3/
3 33H PRINT TRANSGENERATED VARIABLES.....3X,A3/
4 33H PRINT CORRELATION MATRICES.....3X,A3/
5 33H FORECAST DATA INPUT.....3X,A3/
6 33H REWIND INPUT TAPE.....3X,A3/
7 33H NUMBER OF TRANSGENERATION CARDS.....16/
8 33H SPECIFIED BCD TAPE NUMBER.....16/
9 33H NUMBER OF VARIABLE FORMAT CARDS.....16)
104 FORMAT(///23H TRANS-GENERATION CARDS//)
105 FORMAT(30H CARD NEW TRANS OLD CONST./,33H NO. VAR. CODE VARIA00004880
1) OR VAR(9)/) 00004880
106 FORMAT(16,12,12,13,F8,0) 00004880
107 FORMAT(14,15,16,15,4X,F10,5) 00004870
108 FORMAT(16,2213) 00004880
109 FORMAT(16,22A3)
110 FORMAT(23HOGROUP DEFINITION CARDS) 00004900
111 FORMAT(16,12,6(12,A2,F5,0,A1)) 00004810
112 FORMAT(///20H0A CASE IS IN GROUP 12,4H IF,/) 00004920
113 FORMAT(15H VAR(12,5H) IS 42,1H F10,5,1H A1) 00004930
114 FORMAT(16A10) 00004940
115 FORMAT(///26H GROUP NO. SAMPLE/25H SPECIFIED ASSIGNED* SIZE00004850
1//) 00004980
116 FORMAT(16,12,7X,12,4X,15) 00004970
117 FORMAT(///30H VARIABLE MEANS FOR EACH GROUP//)
118 FORMAT(///11H GROUP NO. 12/)
119 FORMAT(16A2,A6,E13,7,*)//)
120 FORMAT(14H-SUMS OF SQUARES AND CROSS PRODUCT MATRIX) 00005010
121 FORMAT(14H FOR TOTAL //) 00005020
122 FORMAT(15H FOR TREATMENT //) 00005030
123 FORMAT(14H FOR ERROR //) 00005040
124 FORMAT(26H-INVERSE OF THE COVARIATES/21H CROSS PRODUCT MATRIX) 00005050
150 FORMAT(109H120HTRANSGENERATION CARDS13,35H HAS INVALID CODE FOR TH00005280
115 PROGRAM : 00005400
151 FORMAT(16,16A2)
152 FORMAT(16,16A2)

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153 FORMAT(//.1M .A6.22A2)
154 FORMAT(//20M COVARIATE SELECTION CARDS)
155 FORMAT(//10M SAMPLE SIZE CARDS//)
157 FORMAT(//.1M .A6.22A2)
249 FORMAT(//.1M .E13.7)
250 FORMAT(//.1M .E10)
300 FORMAT(//.31M STANDARD DEVIATION (WITHIN) * .E16.10)
301 FORMAT(//.31M STANDARD DEVIATION (TOTAL) * .E16.10)
302 FORMAT(//.10M TREATMENT .6X.8MSTANDARD .73X.3MNO .9X.8MDEVIATION.
1.16X.8M(WITHIN).//)
303 FORMAT(//.15.5X.E16.10)
415 FORMAT(//11M DATA INPUT)
416 FORMAT(//15M TRANSGENERATED/11M DATA INPUT)
418 FORMAT(//30M CASE NUMBER IS.45X.13MGROUP NUMBER IS)
777 FORMAT(A6)
888 FORMAT(//3M X1.12.1M)
9999 FORMAT(//MO.23X.71MNUMBER OF VARIABLE FORMAT CARDS INCORRECTLY SPECIFIED.
ASSUMED TO BE 1.)
END
00005470
00005480
0000005490
00005500
00005520

```

```

C ..... MINV 10
C ..... MINV 20
C ..... MINV 30
C ..... MINV 40
C ..... MINV 50
C ..... MINV 60
C ..... MINV 70
C ..... MINV 80
C ..... MINV 90
C ..... MINV 100
C ..... MINV 110
C ..... MINV 120
C ..... MINV 130
C ..... MINV 140
C ..... MINV 150
C ..... MINV 160
C ..... MINV 170
C ..... MINV 180
C ..... MINV 190
C ..... MINV 200
C ..... MINV 210
C ..... MINV 220
C ..... MINV 230
C ..... MINV 240
C ..... MINV 250
C ..... MINV 260
C ..... MINV 270
C ..... MINV 280
C ..... MINV 290
C ..... MINV 300
C ..... MINV 310
C ..... MINV 320
C ..... MINV 330
C ..... MINV 340
C ..... MINV 350
C ..... MINV 360
C ..... MINV 370
C ..... MINV 380
C ..... MINV 390
C ..... MINV 400
C ..... MINV 410
C ..... MINV 420
C ..... MINV 430
C ..... MINV 440
C ..... MINV 450
C ..... MINV 460
C ..... MINV 470
C ..... MINV 480
C ..... MINV 490
C ..... MINV 500
C ..... MINV 510
C ..... MINV 520
C ..... MINV 530
C ..... MINV 540
C ..... MINV 550
C ..... MINV 560
C ..... MINV 570
C ..... MINV 580
C ..... MINV 590
C ..... MINV 600

```

SUBROUTINE MINV

PURPOSE
INVERT A MATRIX

USAGE
CALL MINV(A,N,D,L,M)

DESCRIPTION OF PARAMETERS
A - INPUT MATRIX, DESTROYED IN COMPUTATION AND REPLACED BY
RESULTANT INVERSE.
N - ORDER OF MATRIX A
D - RESULTANT DETERMINANT
L - WORK VECTOR OF LENGTH N
M - WORK VECTOR OF LENGTH N

REMARKS
MATRIX A MUST BE A GENERAL MATRIX

SUBROUTINES AND FUNCTION SUBPROGRAMS REQUIRED
NONE

METHOD
THE STANDARD GAUSS-JORDAN METHOD IS USED. THE DETERMINANT
IS ALSO CALCULATED. A DETERMINANT OF ZERO INDICATES THAT
THE MATRIX IS SINGULAR.

SUBROUTINE MINV(A,N,D,L,M)
DIMENSION A(1),L(1),M(1)

IF A DOUBLE PRECISION VERSION OF THIS ROUTINE IS DESIRED, THE
C IN COLUMN 1 SHOULD BE REMOVED FROM THE DOUBLE PRECISION
STATEMENT WHICH FOLLOWS.

DOUBLE PRECISION A,D,BIGA,HOLD

THE C MUST ALSO BE REMOVED FROM DOUBLE PRECISION STATEMENTS
APPEARING IN OTHER ROUTINES USED IN CONJUNCTION WITH THIS
ROUTINE.

THE DOUBLE PRECISION VERSION OF THIS SUBROUTINE MUST ALSO
CONTAIN DOUBLE PRECISION FORTRAN FUNCTIONS. ABS IN STATEMENT
10 MUST BE CHANGED TO DABS.

SEARCH FOR LARGEST ELEMENT

D=1.0
N=N
DO 50 I=1,N
N=N+N
L=L+K
L=L+K

```

N(K)=K MINV 610
NR=NR+K MINV 620
BIGA=A(KK) MINV 630
DO 20 J=K,N MINV 640
I2=0 IJ-1 MINV 650
DO 20 I=K,N MINV 660
IJ=I2+1 MINV 670
10 IF(DABS(BIGA)-DABS(A(IJ))) 15,20,20 MINV 680
15 BIGA=A(IJ) MINV 690
L(K)=I MINV 700
M(I)=J MINV 710
20 CONTINUE MINV 720
C C C INTERCHANGE ROWS MINV 730
C C C J=L(K) MINV 740
IF(J=K) 35,35,25 MINV 750
25 KI=K-N MINV 760
DO 30 I=1,N MINV 770
KI=KI+K MINV 780
HOLD=A(KI) MINV 790
JI=KI-K+J MINV 800
A(KI)=A(JI) MINV 810
30 A(JI)=HOLD MINV 820
C C C INTERCHANGE COLUMNS MINV 830
C C C I=M(K) MINV 840
IF(I=K) 45,45,38 MINV 850
38 JP=M(I-1) MINV 860
DO 40 J=1,N MINV 870
JK=KK+J MINV 880
JI=JP+J MINV 890
HOLD=A(JK) MINV 900
A(JK)=A(JI) MINV 910
40 A(JI)=HOLD MINV 920
C C C DIVIDE COLUMN BY MINUS PIVOT (VALUE OF PIVOT ELEMENT IS MINV 930
CONTAINED IN BIGA) MINV 940
45 IF(BIGA) 48,48,48 MINV 1000
48 D=0.0 MINV 1010
RETURN MINV 1020
48 DO 55 I=1,N MINV 1030
IF(I=K) 50,55,50 MINV 1040
50 IK=NR+I MINV 1050
A(IK)=A(IK)/(1-BIGA) MINV 1060
55 CONTINUE MINV 1070
C C C REDUCE MATRIX MINV 1080
C C C DO 65 I=1,N MINV 1090
IK=NR+I MINV 1100
HOLD=A(IK) MINV 1110
IJ=1-N MINV 1120
DO 65 J=1,N MINV 1130
IJ=IJ+K MINV 1140
IF(I=K) 60,65,60 MINV 1150
60 IF(IJ=K) 62,65,62 MINV 1160
62 KJ=IJ-I+K MINV 1170
A(IJ)=HOLD+A(KJ)-A(IJ) MINV 1210
65 CONTINUE MINV 1220
C C C DIVIDE ROW BY PIVOT MINV 1230
C C C KJ=K-N MINV 1240
DO 75 J=1,N MINV 1250
KJ=KJ+K MINV 1260
IF(IJ=K) 70,75,70 MINV 1270
70 A(KJ)=A(KJ)/BIGA MINV 1280
75 CONTINUE MINV 1290
C C C PRODUCT OF PIVOTS MINV 1300
D=D*BIGA MINV 1310
C C C REPLACE PIVOT BY RECIPROCAL MINV 1320
A(NR)=1.0/BIGA MINV 1330
80 CONTINUE MINV 1340
C C C FINAL ROW AND COLUMN INTERCHANGE MINV 1350
C C C K=N MINV 1360
100 K=(K-1) MINV 1370
IF(K) 150,150,105 MINV 1380
105 I=L(K) MINV 1390
IF(I=K) 120,120,100 MINV 1400
108 JQ=NR+K-1 MINV 1410
JR=NR+I-1 MINV 1420
DO 110 J=1,N MINV 1430
JK=JQ+J MINV 1440
HOLD=A(JK) MINV 1450
JI=JR+J MINV 1460
A(JK)=A(JI) MINV 1470
110 A(JI)=HOLD MINV 1480
120 J=M(K) MINV 1490
IF(J=K) 100,100,125 MINV 1500
125 NI=K-N MINV 1510
DO 130 I=1,N MINV 1520
KI=KI+K MINV 1530
HOLD=A(KI) MINV 1540
JI=KI-K+J MINV 1550
A(KI)=A(JI) MINV 1560
130 A(JI)=HOLD MINV 1570
GO TO 100 MINV 1580
150 RETURN MINV 1590
END MINV 1600

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C      SUBROUTINE GRPSEL FOR BMD04V      APRIL 1, 1966      00005900
SUBROUTINE GRPSEL(M)      00005910
DIMENSIONDATA(100),NSUB(99,6),CONT(99,6),REL(99,6),OPER(99,6),B(6) 00005920
,NG(99),E(7)      00005930
COMMON DATA , NSUB , CONT , REL , OPER , NG      00005940
DATA A,0,STAR,E/4NA ,4M0 ,4M+ ,4MGT ,4MLT ,4MLE ,4MGE , 00005950
,2NEQ,2MME,2M /      00005960
FB=1.0      00005970
ASSIGN 105 TO ISKIP      00005980
500 DD 90 I=1,6      00005990
IS=NSUB(M,I)      00006000
IF(REL(M,I) .EQ. E(1)) GO TO 2      00006010
IF(REL(M,I) .EQ. E(2)) GO TO 4      00006020
IF(REL(M,I) .EQ. E(3)) GO TO 6      00006030
IF(REL(M,I) .EQ. E(4)) GO TO 8      00006040
IF(REL(M,I) .EQ. E(5)) GO TO 10      00006050
IF(REL(M,I) .EQ. E(6)) GO TO 11      00006060
IF(REL(M,I) .EQ. E(7)) GO TO 100      00006070
96 WRITE (6,4000)REL(M,I)      00006080
M=M+6      00006090
GO TO 104      00006100
2 IF(DATA(15)-CONT(M,I))50,50,20      00006110
4 IF(DATA(15)-CONT(M,I))20,50,50      00006120
6 IF(DATA(15)-CONT(M,I))20,20,50      00006130
8 IF(DATA(15)-CONT(M,I))50,20,20      00006140
10 IF(DATA(15)-CONT(M,I))50,20,50      00006150
11 IF(DATA(15)-CONT(M,I))20,50,20      00006160
20 B(I)=1.0      00006170
GO TO 90      00006180
50 E(I)=0.0      00006190
90 CONTINUE      00006200
100 GO TO ISKIP,(105,125)      00006210
125 IF(OPER(M,6) .NE. 6) GO TO 150      00006220
FB=FB*B(I)      00006230
GO TO 175      00006240
105 IF(OPER(M,1) .EQ. A) GO TO 147      00006250
IF(OPER(M,1) .NE. 0) GO TO 170      00006260
147 FB=B(I)      00006270
GO TO 175      00006280
150 IF(OPER(M,6) .EQ. 0) GO TO 152      00006290
I = 6      00006300
REL(M,6)=OPER(M,6)      00006310
GO TO 94      00006320
170 FB=B(I)      00006330
GO TO 350      00006340
152 IF(FB .LE. 0.) GO TO 147      00006350
175 DD 300 I=1,5      00006360
IF(OPER(M,I) .NE. A) GO TO 222      00006370
FB = FB*B(I)+1      00006380
GO TO 300      00006390
222 IF(OPER(M,I) .NE. 0) GO TO 333      00006400
IF(FB .GT. 0.) GO TO 300      00006410
FB=B(I)+1      00006420
300 CONTINUE      00006430
IF(OPER(M,6) .EQ. STAR) GO TO 350      00006440
M=M+1      00006450
ASSIGN 125 TO ISKIP      00006460
GO TO 500      00006470
333 IF(OPER(M,I) .EQ. STAR) GO TO 350      00006480
REL(M,I)=OPER(M,I)      00006490

GO TO 96      00006500
350 IF(FB .LE. 0.) GO TO 104      00006510
DATA(100) = WG(M)      00006520
104 RETURN      00006530
4000 FORMAT(10H14230MILLEGAL OPERATION OR RELATION A2,5TH. PROGRAM WILL
1 PROCEED TO NEXT JOB, IF ANY, OR TERMINATE.)      00006550
END      00006560

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C          SUBROUTINE PATTY2 FOR BM004V          APRIL 1, 1966          00006570
SUBROUTINE PATTY2 (A,N,NAMES,D)
DIMENSION NAMES(26),NW(8),A(26,26),WHEN(3)          00006590
REAL NAMES,NW
CALL 1DAY(WHEN)
K=0          00006600
IK=50/(N+3)
IF(IK.LE.0)IK=1
IT=1          00006610
KK=0          00006620
K1=IT          00006630
K2=MIN0(B,N)          00006640
10 KK=KK+8          00006650
IF(N .LE. KK) GO TO 20          00006660
IT=IT+1          00006670
GO TO 10          00006680
20 DO 70 J=1,IT          00006690
LLL=K2-K1+1          00006700
LL=0          00006710
DO 30 JJ=K1,K2          00006720
LL=LL+1          00006730
30 NW(LL)=NAMES(JJ)          00006740
K=K+1
IF(N.LE.IK)GO TO 31
K=1
WRITE(6,71) WHEN
31 WRITE (6,50) (NW(I),I=1,LLL)
WRITE (6,60)
DO 40 I=1,N          00006750
40 WRITE (6,60)NAMES(I),(A(I,J),J=K1,K2)          00006770
K1=K2+1          00006780
K2=K1+7          00006790
50 FORMAT(10F12X,A6,710E,A6)
60 FORMAT(1X,A6,1X,6E14,7)
80 FORMAT(1X)
90 FORMAT(//17H SINGULAR MATRIX.)
70 CONTINUE          00006830
71 FORMAT(1H,105Z,3A10,7//)
IF(D.EQ.0.) WRITE (6,90)
RETURN          00006840
END          00006850

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SUBROUTINE TGA(I,I,M)          00006860
DIMENSIONDATA(100),NSUB(99,6),CONT(99,6),REL(99,6),OPER(99,6),NG(99,6)          00006870
1) NEW(99),JUMP(99),NA(99),BN(99)          00006880
COMMON DATA , NSUB , CONT , REL , OPER , NG          00006890
COMMON LM , NEW , JUMP , NA , BN , IERROR          00006900
COMMON NVAR , NTG , NCASE          00006910
EXTERNAL SIGN          00006915
ASHX) = ATAN(X/SQRT(1-X**2))          00006920
SAMP=NCASE          00006930
PI2=1.57079633          00006940
DO 10 I=1,NTG          00006950
J=JUMP(I)          00006960
NW=NEW(I)          00006970
IF(NW .GE. 100) GO TO 57          00006980
NAA=NAA(I)          00006990
IF(NAA .GE. 100) GO TO 57          00007000
100 NB=BN(I)          00007010
BB=BB(I)          00007020
D1=DATA(NAA)          00007030
IF(JDKE .LE. 17) GO TO 33          00007040
J=J=J=2          00007050
IF(JDKE .LE. 22) GO TO 33          00007060
J=23          00007070
33 GO TO (1,2,3,4,5,6,7,8,9,10,11,11,11,11,150,11,170,180,190,200)          00007080
1,21,22,230)J=JKE          00007090
1) IF( D1 ) 199,11,12          00007100
D2=0.0          00007110
GO TO 1000          00007120
12 D2=SQRT(D1)          00007130
GO TO 1000          00007140
2) IF( D1 ) 199,13,14          00007150
13 D2=1.0          00007160
GO TO 1000          00007170
14 D2 =SQRT( D1 -SQRT( D1 -1.0)          00007180
GO TO 1000          00007190
3) IF( D1 .LE. 0.) GO TO 99          00007200
D2=ALOG10(D1)          00007210
GO TO 1000          00007220
4) D2=EXP(D1)          00007230
GO TO 1000          00007240
5) IF( D1 ) 199,11,17          00007250
17) IF( D1 ) -1.0)18,19,99          00007260
19 D2=PI2          00007270
GO TO 1000          00007280
16 A=SQRT(D1)          00007290
D2=ASN(A)          00007300
GO TO 1000          00007310
6) A = D1 / (SAMP+1.0)          00007320
B=1.0/(SAMP+1.0)          00007330
IF(A)99,27,24          00007340
27) D2 =ASN(SQRT(B))          00007350
GO TO 1000          00007360
24) IF(B)99,28,29          00007370
28) IF(A-1.0)285,287,99          00007380
285) D2 =ASN(SQRT(A))1+2.0          00007390
GO TO 1000          00007400
287) D2 =3.14159265          00007410
GO TO 1000          00007420
29) A=SQRT(A)          00007430
B=SQRT(B)          00007440

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IF(A .GT. 1. .OR. B .GT. 1.) GO TO 99
D2 =ASMEI+ASH(B)
GO TO 1000
7 IF( D1 .EQ. 0.) GO TO 99
D2 =1.0/D1
GO TO 1000
8 D2=D1+BBH
GO TO 1000
9 D2=D1+BBH
GO TO 1000
10 IF( D1 .LE. 11.32
32 D2=D1+BBH
GO TO 1000
111 IF(NB .GE. 100) GO TO 97
NSKIP=J0KE-10
GO TO(110,120,130,140,150,160).NSKIP
110 D2 = D1 -DATA(NB)
GO TO 1000
120 D2 = D1 -DATA(NB)
GO TO 1000
130 D2 = D1 +DATA(NB)
GO TO 1000
140 IF(DATA(NB) .EQ. 0.) GO TO 98
D2 = D1 /DATA(NB)
GO TO 1000
150 IF( D1 .-BBH)11,13,13
160 IF( D1 .-DATA(NB))11,13,13
170 IF( D1 .LE. 0.) GO TO 99
D2 =ALOG(D1)
GO TO 1000
180 D2 =SIN(D1)
GO TO 1000
190 D2 =COS(D1)
GO TO 1000
20 D2=ATAN(D1)
GO TO 1000
21 IF( D1 .LE. 11.38
38 IF(NB .GE. 100) GO TO 97
D2=D1+DATA(NB)
GO TO 1000
22 IF(BBH)99,11,40
40 D2+BBH=D1
GO TO 1000
230 IF( D1 .NE. 0.) GO TO 1000
IF(SIGN(10.0, D1) .1743,1000,1000
43 D2+BBH
GO TO 1000
97 WRITE (6,4001)
GO TO 991
98 NAA=NR
99 WRITE (6,4000)NAA,JUMP(I),I,M
991 WRITE (6,4002)
GO TO 1010
1000 DATA(NW)=D2
1010 CONTINUE
RETURN
4000 FORMAT(17H0DATA OF VARIABLE I4,30H VIOLATES RESTRICTION FOR CODE I3,00008020
130H, THIS WAS FOR TREATMENT GROUP I3,7H SAMPLE I4) 00008030
4001 FORMAT(20H0TRANSGENERATOR CARD I3,44H HAS VARIABLE NUMBERS TOO LARG00008040
1E FOR PROGRAM.) 00008050

4002 FORMAT(32H THE DATA WILL REMAIN UNCHANGED.) 00008060
END 00008070

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C          SUBROUTINE TPMD FOR BMD04V          APRIL 1, 1968          00000680
SUBROUTINE TPMD(NT1, NT2)
IF(NT1.EQ.10,12)
10 NT1=5          00000690
12 IF(NT1.EQ. NT2) GO TO 18          00000700
IF(NT2.EQ.5)GO TO 18          00000710
REWIND NT2          00000720
18 IF(NT1.EQ. 5) GO TO 24          00000730
IF(NT1.EQ. 6) GO TO 40          00000740
REWIND NT1          00000750
24 NT=NT1          00000760
RETURN          00000770
40 WRITE (6,49)          00000780
STOP          00000790
49 FORMAT(25H ERROR ON TAPE ASSIGNMENT)          00000800
END          00000810

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SUBROUTINE WRT(N1, N2, N3, N4, N5, N6, TREVV, ERRVY, TOTVY, SSDERR, SSAERR, 00008230
SSAERR, SSDTOT, SSATOT, TEST, FTST, ADJTES, HCOV, SMATOT, BIG, HGRPS, NAME$00008240
2, ERRXX, TOTXX, TREXX, SMATRE, SSDTRE, SSATRE)
REAL NAMES          00008260
DIMENSION DATA(100), NSUB(99,4), CONT(99,4), REL(99,4), OPER(99,4),
*NG(99), S(35), SSVAR(99,36), TOTXX(35,36), ERRXX(35,36), B(35,C(35)),
1D(35), SEB(35), SEC(35), ADY(99), SEADY(99), NAMES(35), A(99)
2, TREXX(35,36), SED(35), WHEN(3)
COMMON DATA, NSUB, CONT, REL, OPER, NG          00008300
COMMON LN, NEM(99), JUMP(99), NA(99), BN(99), IERROR          00008302
COMMON HVAR, HTO, NCASE          00008304
COMMON /MT/A, B, C, D, SEB, SEC, SED, SSVAR, ADY, SEADY, YAC, WHEN
PRINT 124, WHEN
PRINT 125
PRINT 126          00008320
PRINT 127          00008320
PRINT 128          00008340
PRINT 129          00008340
PRINT 127          00008350
PRINT 129          00008360
PRINT 127          00008370
PRINT 130          00008380
PRINT 127          00008390
PRINT 131          00008400
PRINT 132, NT, TREVV
PRINT 127          00008420
PRINT 130          00008430
PRINT 127          00008440
PRINT 132, N2, ERRVY, SSDERR, SSAERR, NS, SMAERR
PRINT 134
PRINT 130          00008470
PRINT 127          00008480
PRINT 131          00008490
PRINT 136, N3, TOTVY, SSDTOT, SSATOT, N6, SMATOT
PRINT 137
PRINT 127          00008520
PRINT 130          00008530
PRINT 127          00008540
PRINT 130, TEST, N1, ADJTES          00008550
PRINT 127          00008560
PRINT 128          00008570
PRINT 130          00008580
PRINT 140, N1, NS, FTST          00008590
PRINT 124, WHEN
PRINT 141
PRINT 142          00008610
PRINT 143
124 FORMAT(1H, 10X, 3A10)
125 FORMAT(35X, 20H ANALYSIS OF COVARIANCE TABLE/)
126 FORMAT(1H 93(1H))
127 FORMAT(2H *, 11X, 1H, 7X, 1H, 3(15X, 1H), 7X, 1H, 15X, 1H*)
128 FORMAT(2H *, 11X, 1H, 7X, 1H, 15X, 22H) SUM-SQUARES 1 SUM-SQUARES          00008660
*1, 7X, 1H, 15X, 1H*)          00008670
129 FORMAT(94H * SOURCE 1 OF 2 Y Y 1 (DUE) 1          00008680
* (ADJUST) 1 OF 1 MEAN-SQUARE *)          00008690
130 FORMAT(2H *, 91(1H-), 1H*)          00008700
*1 FORMAT(14H * TREATMENT 1, 7X, 1H, 3(15X, 1H), 7X, 1H, 15X, 1H*)          00008710
132 FORMAT(15H * (CUTWGT) 1, 19, 1H, 2H) E13, 7, 1H, 3(2H, 13X, 1H), 2H
*1, 5X, 2H 1, 12X, 2H *)
133 FORMAT(15H * ERROR 1, 19, 1X, 3(2H) E13, 7, 1H, 1, 2H) E13, 7
1, 2H *)          00008760
134 FORMAT(14H * (N7H1) 1, 7X, 1H, 3(15X, 1H), 7X, 1H, 15X, 1H*)

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136 FORMAT(15H * ERROR I .15,1X,3(2M1 E13.7,1M 1,2M1 15.3M 1 E13.7
X,2M #)
137 FORMAT(14H * (TOTAL) 7.7X,1M1,2(15X,1M1),7X,1M1,15X,1M#)
138 FORMAT(15H * DIFFERENCE FOR TESTING ADJUSTED TREATMENT MEANS... I E
*13.7,3M 1,15.3M 1,E13.7,2M #)
139 FORMAT(1/50)HULL HYPOTHESIS: NO DIFFERENCE AMONG TREATMENTS AFTER
*18X,24MADJUSTING WITH COVARIATES.//)
140 FORMAT(18X,2M1,15.1M,15.2M1,FR.2//)
142 FORMAT(1M 16X,19MTREATMENT (BETWEEN)//)
DO 68 I=1,NCOV
SED(I)=SMATRE+TRXX(I,1)
IF(SED(I).GT.0.)GO TO 65
PRINT 144,NAMES(I),D(I)
GO TO 68
65 SED(I)=SQRT(SED(I))
T=D(I)/SED(I)
CALL CONFIM,T,P)
PRINT 144,NAMES(I),D(I),SED(I),T,P
68 CONTINUE
PRINT 124,WHEN
PRINT 141
PRINT 145
PRINT 143
DO 69 I=1,NCOV
SED(I)=SMAERR*ERRXX(I,1)
IF(SED(I).GT.0.)GO TO 66
PRINT 144,NAMES(I),B(I)
GO TO 69
66 SED(I)=SQRT(SED(I))
T=B(I)/SED(I)
CALL CONFIM,T,P)
PRINT 144,NAMES(I),B(I),SED(I),T,P
69 CONTINUE
PRINT 124,WHEN
PRINT 141
PRINT 146
PRINT 143
DO 70 I=1,NCOV
SEC(I)=SMATOT*TOTXX(I,1)
IF(SEC(I).GT.0.)GO TO 67
PRINT 144,NAMES(I),C(I)
GO TO 70
67 SEC(I)=SQRT(SEC(I))
T=C(I)/SEC(I)
CALL CONFIM,T,P)
PRINT 144,NAMES(I),C(I),SEC(I),T,P
70 CONTINUE
DO 82 J=1,NGRPS
X(I)=0.0
DO 82 J=1,NGRPS
T1=NG(J)
821 X(I)=X(I)+SSVAR(J,1)*T1/81G
DO 72 J=1,NGRPS
SEADY(J)=0.
T1=0.0
T1=NG(J)
T1=1.0/T1
DO 71 I=1,NCOV
71 T=T+B(I)*(SSVAR(J,1)-X(I))
ADY(J)=SSVAR(J,NVAR)-T
DO 73 I=1,NCOV
DO 73 K=1,NCOV
73 T1=T1+(SSVAR(J,1)-X(I))*(ERRXX(I,K)+(SSVAR(J,K)-X(K))
IF(SMAERR*71.LT.0.) GO TO 72
SEADY(J)=SQRT(SMAERR*T1)
72 CONTINUE
DO 76 I=1,NGRPS
IF(MOD(I,50).NE.1)GO TO 74
PRINT 124,WHEN
PRINT 147
PRINT 148
74 IF(SEADY(I).GE.0.) GO TO 75
PRINT 149,I,SSVAR(I,NVAR),ADY(I)
GO TO 76
75 PRINT 149,I,SSVAR(I,NVAR),ADY(I),SEADY(I)
76 CONTINUE
YAC=X(NVAR)
YAD=X(NVAR)
DO 79 I=1,NCOV
YAC=YAC-C(I)*A(I)
79 YAD=YAD-D(I)*B(I)
PRINT 124,WHEN
PRINT 150
PRINT 154,YAD
PRINT 155,YAC
PRINT 151
LL=0
DO 78 I=1,NGRPS
LL=LL+1
A(I)=SSVAR(I,NVAR)
DO 77 J=1,NCOV
77 A(I)=A(I)-B(J)*SSVAR(I,J)
IF(LL.LE.45)GO TO 78
LL=1
PRINT 124,WHEN
PRINT 150
PRINT 151
79 PRINT 153,I,A(I)
141 FORMAT(1/50)H TABLE OF COEFFICIENTS, STANDARD ERRORS AND COMPUTED T-VALUES//)
*VALUES//)
143 FORMAT(1M 10X,50NCOEFFICIENT STAND. ERROR T-VALUE COV
IF(DEN//)
144 FORMAT(1M .46,1X,E16.10,E16.10,1X,F11.6,5X,F9.5)
145 FORMAT(1M 23X,14MERROR (WITHIN)//)
146 FORMAT(1M 18X,23MTREATMENT-ERROR (TOTAL)//)
147 FORMAT(144M TABLE OF ADJUSTED MEANS AND STANDARD ERRORS//)
148 FORMAT(49M TREATMENT TREATMENT ADJUSTED SE ADJUSTED/6M N
*0.7X,4MMEAN&9X,4MSEAN//)
149 FORMAT(1M .15,3X,E13.7,1X,E13.7,1X,E13.7,1X,E13.7)
150 FORMAT(20M TABLE OF INTERCEPTS//)
151 FORMAT(23M TREATMENT INTERCEPT/23M NO. (WITHIN)//)
154 FORMAT(26M INTERCEPT * .E16.10/23M 18BETW
IEEN)//)
155 FORMAT(26M INTERCEPT * .E16.10/23M [TOT
1AL)//)
153 FORMAT(1M .15,5X,E16.10)
RETURN
END
00009350
00009340

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SUBROUTINE LDAY(MDAY)
DIMENSION MDAY(3), LONG(7), MONTH(12), IBREV(7)
DATA MONTH / 31, MAR, 31, APR, 30, MAY, 31, JUN, 30, JUL, 31, AUG,
1 31, SEP, 30, OCT, 31, NOV, 30, DEC, 31, JAN, 31, FEB,
DATA LONG / 10H, SUNDAY, 10H, MONDAY, 10H, TUESDAY,
1 10H, WEDNESDAY, 10H, THURSDAY, 10H, FRIDAY, 10H, SATURDAY, /
DATA IBREV / 10H, SUN, 10H, MON, 10H, TUE,
1 10H, WED, 10H, THU, 10H, FRI, 10H, SAT, /
1 FORMAT(3(1X12))
2 FORMAT(A6,12,4H, 19,12)
3 FORMAT(14)
1 = 3
GO TO 4
ENTRY SDAY
1 = 1
4 CALL DATE(DAY)
DECODE(10,1,DAY,IV,IM,IO)
IA = IM
IF( IO.LC.31 ) GO TO 5
IM = IV
IV = IO
IO = IA
5 IM = IM + IO
IF( IM.GT.12 ) IM = IM - 12
ENCODE(10,2,MDAY(2),MONTH(IM),IO,IV)
DECODE(10,3,MDAY(3),NYEAR)
IF( IM.GE.11 ) NYEAR = NYEAR - 1
NC = NYEAR/100
ND = NYEAR - 100*NC
IC = 2.59 + FLOAT( IM )
IC = IC + ND/4
IC = MOD(IC + IO - NC - ND + NC/4, 7)
IF( IC.LT.0 ) IC = IC + 7
IF( I - 1 ) 7, 7, 6
6 MDAY(1) = LONG( IC+1 )
RETURN
7 MDAY(1) = IBREV( IC+1 )
RETURN
END

```

```

SUBROUTINE CONF(N,T,P)
P = 5
IF( N.LT.1 ) GO TO 6
RPI = 3.141592653589793
TP = ABS(T)/SQRT(FLOAT(N))
I = N - 2*(N/2)
IF( I.EQ.1 ) GO TO 3
P = P + (.5*TP/SQRT(1.+(TP*TP)))
IF( N.EQ.2 ) GO TO 6
DO 2 I = 4, N, 2
AK = 1
DO 1 J = 4, I, 2
AK = AK*(FLOAT(J-3))/(FLOAT(J-2))
1 CONTINUE
P = P + (.5*TP/SQRT(1.+(TP*TP)))*(AK*((1.+(TP*TP))**((I-1)/2)))
2 CONTINUE
GO TO 6
3 P = P - RPI + ATAN(TP)
IF( N.EQ.1 ) GO TO 6
P = P + (RPI*TP)/(1.+(TP*TP))
IF( N.EQ.3 ) GO TO 6
DO 5 I = 5, N, 2
AK = 1
DO 4 J = 5, I, 2
AK = AK*(FLOAT(J-3))/(FLOAT(J-2))
4 CONTINUE
P = P + (RPI*TP)/(1.+(TP*TP))*(AK*((1.+(TP*TP))**((I-1)/2)))
5 CONTINUE
P = 100 * P
RETURN
END

```

NADC-77036-30

A P P E N D I X C

ANALYSIS OF COVARIANCE COMPUTER PROGRAM USER'S GUIDE

NADC-77036-30

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ANALYSIS OF COVARIANCE WITH MULTIPLE COVARIATES AND
FORECAST CAPABILITY

DESCRIPTION

1. This program is designed to compute Analysis-of-Covariance information for one Analysis-of-Variance Variable with multiple Covariates and unequal treatment groups sizes. Cases may be specified by the user as being in certain treatment groups, or cases may be placed in treatment groups by the program in accordance with a specified boolean expression. The program provides the capability to input forecast case data to test the accuracy of the defined covariance statistical model.

2. Output from this program includes:
 - a. List of case numbers, data input, and group designation (optional).
 - b. Variable means for each treatment group.
 - c. Total mean for each variable.
 - d. Correlation matrices for total, treatment, and error (optional).
 - e. Sums of products matrices for total, treatment, and error.
 - f. The inverses of the Covariate matrices for total, treatment, and error.
 - g. Analysis-of-Covariance table with degrees of freedom, sums of squares, mean squares, and F-ratio.
 - h. Tables of regression coefficients, their standard errors, and computed t-values with and without adjustment for groups.
 - i. Table of adjusted means and their standard errors.
 - j. Table of Intercepts for Total, Treatment, and Error.
 - k. Table of residuals for Total and Error.
 - l. Table of Sum-Squares within.
 - m. Table of Transgenerated Data Input with Case Numbers, and Group Designation (Optional).

3. Limitations per problem:
 - a. v - Number of variables read in. However, no more than 36 variables (including the Analysis-of-Variance variable) may enter the computation, i.e., $v + q \leq 36$. Also see limitations (b) and (f) below.
($3 \leq v \leq 99$.)
 - b. p - Number of Covariates ($1 \leq p \leq 35$).
 - c. t - Number of treatment groups ($2 \leq t \leq 99$).

- d. n_i - Sample size of the i^{th} treatment group ($1 \leq n_i \leq 999$).
- e. N - Total number of cases ($t + p + 1) \leq N \leq 99999$
- f. q - Number of variables added to the original set after transgeneration ($-96 \leq q \leq 32$).
- g. m - Number of Transgeneration Cards ($0 \leq m \leq 99$).
- h. g - Number of Group Definition Cards ($0 \leq g \leq 99$).
- i. k - Number of Variable Format Cards ($1 \leq k \leq 10$).

The above limitations are built into the program and are checked for each problem. If violations occur, a message to that effect is printed, and the entire job is skipped by the system.

4. One set of data input may be processed an indefinite number of times. The user may select various combinations of variables by specifying different variable formats. For each variable selection of the data input, different transgeneration options may be used since data does not remain transformed from one variable selection to the next.

5. This program allows for the placement of cases into particular treatment groups in accordance with a boolean expression on the Group Definition Card. If the case under consideration satisfies the boolean expression given on the Group Definition Card, it is assigned to the treatment group specified on the cards. If the case does not satisfy the boolean expression, the case is skipped.

The boolean expression contains the following:

Relationships	}	GT (Greater Than)
		GE (Greater than or equal to)
		LT (Less Than)
		LE (Less than or equal to)
		EQ (Equal To)
		NE (Not Equal To)
Operations	}	A (And)
		ϕ (Or)

For example, 6 21GT3.000A05EQ1.000 ϕ 07LE68.50, states that a case is in treatment group 6 if variable 21 is greater than 3.000 and variable 05 equals 1.000 or variable 07 is less than or equal to 68.50.

The boolean expression should be prepared carefully so that there is no possibility of a case satisfying the expression for more than one group.

6. Information from this program includes that usually computed from standard multiple regression analysis. By an arbitrary partitioning of the data input into at least two treatment groups and ignoring the "WITHIN" output, the program may be used to perform multiple regression analysis.

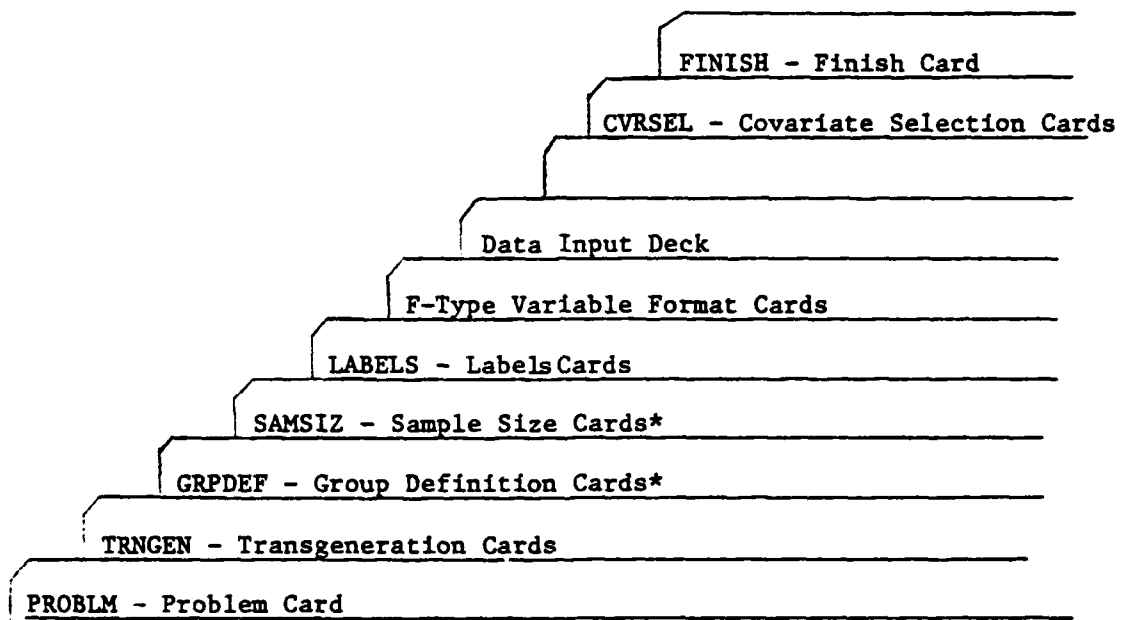
ORDER OF CARDS IN JOB DECK

Cards indicated by numbers enclosed in parentheses are optional. All other cards must be included in the order shown.

1. System Cards
2. Problem Card
- (3.) Standard Transgeneration Cards
- (4.) Group Definition Cards*
- (5.) Sample Size Cards*
- (6.) Labels Cards
7. F-Type Variable Format Cards
8. Data Input Cards (place data input deck here, if data input is from cards).
9. Covariate Selection Cards
. . . Repeat 2. through 9. as desired.
10. Finish Card

*NOTE: Either (4) or (5) must be used but not both.

DECK SET-UP

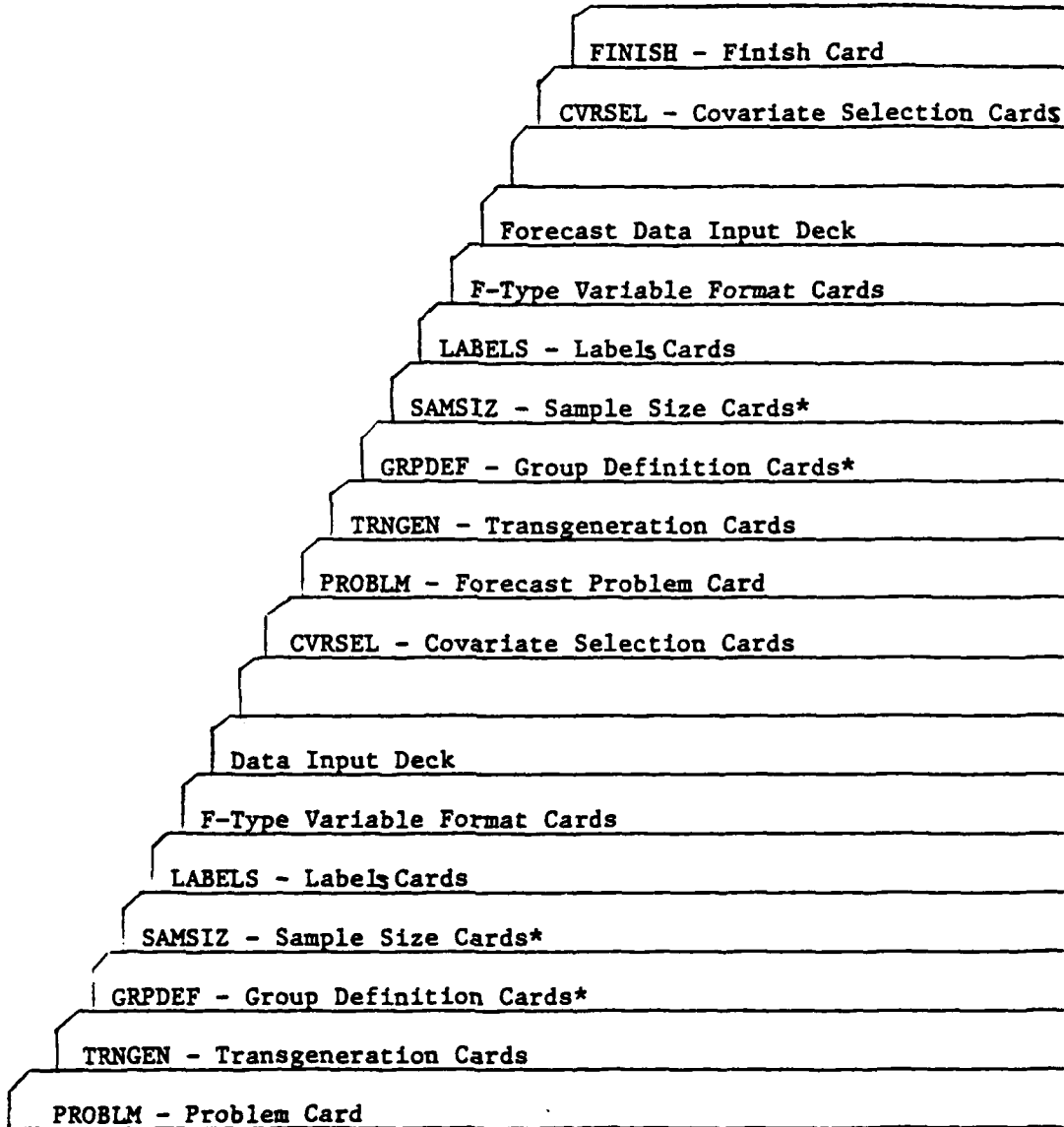


FORECAST DATA JOB DECK

The forecast case data is input in a second problem deck back-to-back with the problem deck that defines the statistical model as described above. The Forecast problem Deck is inserted after the Covariate Selection Cards of the previously defined problem deck. The complete job deck is described as follows:

1. Cards (1) through (9), as shown in the above order of cards in the job deck.
2. Problem Card. (Same as card (2) except for the following; Input the number of forecast cases in Column 15-19, input the characters "Yes" in Columns 61-63.)
3. Repeat cards (3) through (7).
4. Forecast Data Input Cards (Place data input deck here, if data input is from cards.)
5. Repeat card (9).
6. Finish card.

FORECAST DECK SET-UP:



PREPARATION OF PROGRAM CONTROL CARDSPROBLEM CARD (One problem card for each problem.)

Columns 1-6	PROBLM	(Mandatory)
Columns 7-12	Alphanumeric identification. This must be the same as the preceding problem if and only if the same (untransgenerated) data input from that problem is to be the data input for this problem. (This feature avoids reproducing the same data input for more than one consecutive problem.)	
Columns 13-14	Number of treatment groups ($2 \leq t \leq 99$)	
Columns 15-19	Total number of cases for all treatment groups ($t + p + 1 \leq N \leq 99,999$)	
Columns 20, 21	Number of cards per case	
Columns 22, 23	Number of variables read in ($2 \leq V \leq 99$)	
Columns 24-26	000 - No variables added to the original set after transgeneration. q, q - Variables added to the original set after transgeneration. ($-97 \leq q \leq 34$)	

NOTE: Covariates and the variate (dependent variable) may be generated from the original variables as desired by the transgeneration process. The limit of 99 variables cannot be exceeded at any point during transgeneration. No more than 36 variables may enter the computation.

- Columns 27, 28 Index of the variate or dependent variable.
- Columns 29-31 YES - If the data input is to be printed; otherwise, leave blank.
- Columns 32-34 Number of labels specified on Label Cards; if the labels are not specified, leave blank.
- Columns 35-37 YES - If the data cards from the previous problem are to be used. (A different set of variable format cards may be used. If new data cards are to be used, leave these columns blank.)
- Columns 38, 39 Number of Group Definition Cards ($0 \leq g \leq 99$)

NOTE: The number of groups defined by these cards must be the t groups specified in columns 13, 14.

- Columns 40-42 YES - If residuals (within) are to be printed; otherwise, leave blank.
- Columns 43-45 YES - If residuals (total) are to be printed; otherwise, leave blank.
- Columns 46-48 YES - If the transgenerated variables entering the computation are to be printed; otherwise, leave blank.
- Columns 49-57 Blank
- Columns 58-60 YES - If the correlation matrices are to be printed; otherwise, leave blank.
- Columns 61-63 YES - If the forecast data input is included; otherwise, leave blank.
- Columns 65, 66 NO - If input tape is not to be rewound before reading.
- Columns 67, 68 00 - No transgeneration.
 m - m transgeneration cards ($0 \leq m \leq 99$)
- Columns 69, 70 00 - If data input if from cards.
 T - If data input is on logical BCD tape T , ($T \neq 1, 2, 3, 5, 6, 7$)
- Columns 71, 72 Number of variable format cards ($1 \leq k \leq 10$)

TRANSGENERATION CARDS

The term transgeneration is used to include transformations of input variables and creation of new variables prior to the computations performed by the statistical program.

The transformations described below are performed on the values of the variables in each case. In these examples, the symbol X_i will denote the i^{th} variable as well as its value.

EXAMPLES:

$\text{Log}_{10} X_4 \rightarrow X_4$

$\text{Log}_{10} X_4$ replaces X_4

$X_5^c + X_1$

X_5^c replaces X_1

$X_2 + X_3 \rightarrow X_2$

$X_2 + X_3$ replaces X_2

By successive transformations, more complicated relationships may be obtained. For example:

(i) To replace X_5 by $\sqrt{X_1^2 + X_3^2}$ four transformations are required:

Transformation	Variables as they are stored at each step				
	X_1	X_2	X_3	X_4	X_5
$X_1^2 \rightarrow X_1$	X_1^2	X_2	X_3	X_4	X_5
$X_3^2 \rightarrow X_3$	X_1^2	X_2	X_3^2	X_4	X_5
$X_1 + X_3 \rightarrow X_5$	X_1^2	X_2	X_3^2	X_4	$X_1^2 + X_3^2$
$X_5 \rightarrow \sqrt{X_5}$	X_1^2	X_2	X_3^2	X_4	$\sqrt{X_1^2 + X_3^2}$

In this example, it can be seen that the original values of X_5 are irrelevant. Actually the variable X_5 may be a dummy variable introduced by the program specifically to provide capacity for creating new variables by transgeneration. Dummy variables may be required for intermediate storage in order to effect some transformations.

(ii) To replace X_1 by $\text{Exp}(-1/2 X_1^2)$ three transformations are required:

<u>TRANSFORMATION</u>	X_1
$X_1^2 \rightarrow X_1$	X_1^2
$-1/2 X_1 \rightarrow X_1$	$-1/2 X_1^2$
$\text{Exp}(X_1) \rightarrow X_1$	$\text{Exp}(-1/2 X_1^2)$

(iii) To replace X_4 by $X_2 + \text{Log}_{10}(X_4 - X_3 + 100)$ four transformations are required:

<u>TRANSFORMATION</u>	X_1	X_2	X_3	X_4
$X_4 - X_3 \rightarrow X_4$	X_1	X_2	X_3	$X_4 - X_3$
$X_4 + 100 \rightarrow X_4$	X_1	X_2	X_3	$(X_4 - X_3 + 100)$
$\text{Log}_{10} X_4 \rightarrow X_4$	X_1	X_2	X_3	$\text{Log}_{10}(X_4 - X_3 + 100)$
$X_2 + X_4 \rightarrow X_4$	X_1	X_2	X_3	$X_2 + \text{Log}_{10}(X_4 - X_3 + 100)$

The transformations are performed in the order in which the transgeneration cards appear, so that, for example, the two transgenerations $2X_1 \rightarrow X_1$ followed by $X_1 - 2 \rightarrow X_1$, will result in $2X_1 - 2$, whereas $X_1 - 2 \rightarrow X_1$ followed by $2X_1 \rightarrow X_1$ will result in $2(X_1 - 2)$.

TRANSGENERATION LIST

Notation to be used in the following transgeneration list:

i, j, k are variable indices (need not be different)

c is a constant

n is a number of cases or sample size

<u>Code</u>	<u>Transgeneration</u>	<u>Restriction</u>
01	$\sqrt{X_i} \rightarrow X_k$	$X_i \geq 0$
02	$\sqrt{X_i} + \sqrt{X_i + 1} \rightarrow X_k$	$X_i \geq 0$

<u>Code</u>	<u>Transgeneration</u>	<u>Restriction</u>
03	$\text{Log}_{10} X_i \rightarrow X_k$	$X_i > 0$
04	$e^{X_i} \rightarrow X_k$	
05	$\text{ARCSIN} \sqrt{X_i} \rightarrow X_k$	$0 \leq X_i \leq 1$
06	$\text{ARCSIN} \sqrt{X_i/(n+1)} + \text{ARCSIN} \sqrt{(X_i+1)/(n+1)} \rightarrow X_k$	$0 \leq (X_i/n) \leq 1$
07	$1/X_i \rightarrow X_k$	$X_i \neq 0$
08	$X_i + C \rightarrow X_k$	
09	$X_i C \rightarrow X_k$	
10	$X_i^C \rightarrow X_k$	$X_i \geq 0$
11	$X_i + X_j \rightarrow X_k$	
12	$X_i - X_j \rightarrow X_k$	
13	$X_i X_j \rightarrow X_k$	
14	$X_i/X_j \rightarrow X_k$	$X_j \neq 0$
15	If $X_i \geq c$, $1 \rightarrow X_k$; otherwise $0 \rightarrow X_k$	
16	If $X_i \geq X_j$, $1 \rightarrow X_k$; otherwise $0 \rightarrow X_k$	
17	$\text{Log}_e X_i \rightarrow X_k$	$X_i > 0$
20	$\text{Sin } X_i \rightarrow X_k$	
21	$\text{Cos } X_i \rightarrow X_k$	
22	$\text{Arctan } X_i \rightarrow X_k$	
23	$X_i^{X_j} \rightarrow X_k$	$X_i > 0$
24	$C^{X_i} \rightarrow X_k$	$C > 0$

<u>Code</u>	<u>Transgeneration</u>	<u>Restriction</u>
41	If X_i is blank, then $C \rightarrow X_k$; otherwise X_k remains unchanged.	$X_i \neq -0^*$

*NOTE: In reading numeric fields, a blank field may be read as -0.

When a violation of a restriction in the right-hand column occurs during transgeneration, the program will print a diagnostic message and continue the computation with the data unchanged where the violation occurred.

CARD PREPARATION

Column 1-6	TRNGEN	(Mandatory)
Column 7-9	Variable index k	
Columns 10, 11	Code from transgeneration list	
Column 12-14	Variable index i	
Column 15-20	Variable index j or constant C	

The Constant C is punched with a decimal point if used with variables which have an F-Type format and without a decimal point if used with variables which have an I-Type format.

The transgeneration cards for the three examples cited above are:

(i) TRNGEN001100012.0000
 TRNGEN003100032.0000
 TRNGEN00511001000003
 TRNGEN00501005000000

(ii) TRNGEN001100012.0000
 TRNGEN00109001-0.500
 TRNGEN00104001000000

(iii) TRNGEN00412004000003
 TRNGEN00408004100.00
 TRNGEN00403004000000
 TRNGEN00411004000002

GROUP DEFINITION CARDS

If the boolean selection feature is being used to place cases in their treatment groups, Group Definition Cards are prepared to select the cases for the t groups specified in columns 13, 14 of the Problem Card.

Column 1-6	GRPDEF	(Mandatory)
Columns 7, 8	Treatment group number to which case should be assigned if it satisfies the boolean expression.	

Columns 9, 10	Variable index for the first relationship
Columns 11, 12	Relationship
	GT (Greater Than)
	LT (Less Than)
	LE (Less Than or Equal To)
	GE (Greater Than or Equal To)
	EQ (Equal To)
	NE (Not Equal To)
Column 13-17	Constant used in the relationship (punch the decimal point).
Column 18	Operation
	A (AND)
	Ø (OR)
	* (This terminates the boolean expression)
Columns 19, 20	Variable index for the second relationship
Columns 21, 22	Relationship
• • •	
Column 68	Operation

NOTE: If additional boolean expressions are required for a particular treatment group, continue on a second card and terminate the expression with the asterisk (*) in the appropriate column. As many cards as needed may be used as long as the total does not exceed the limitation of 99. Since parentheses cannot be used for compound AND/OR expressions, AND is assumed to precede OR. The statement W OR X AND Y OR Z will operate as W OR (X AND Y) OR Z.

SAMPLE SIZE CARDS

Sample Size Cards are prepared if cases are specified by the user as being in certain treatment groups. These cards are not prepared if the boolean selection feature is used.

Column 1-6	SAMSIZ	(Mandatory)
Column 7-9	Number of cases in 1st treatment group	
Column 10-12	Number of cases in 2nd treatment group	
• • •		
Column 70-72	Number of cases in 22nd treatment group. If there are more than 22 treatment groups, continue keypunching a second card, a third card, etc., in the same manner, i.e.,	
Column 1-6	SAMSIZ	(Mandatory)
Column 7-9	Number of cases in the 23rd treatment group	
• • •		

LABELS CARDS

Labels cards allow the user to substitute alphanumeric names for the usual numeric indices (variable numbers) which appear on the printed output.

CARD PREPARATION

Columns 1-6	LABELS	(Mandatory)
Columns 7-10	The number of the variable (or index) to be named. This number must be right-justified.	
Columns 11-16	The corresponding alphanumeric name.	
Columns 17-20	The number of another variable.	
Columns 21-26	The corresponding alphanumeric name.	
.		
.		
.		
Columns 67-70	The number of another variable.	
Columns 71-76	The corresponding alphanumeric name. (Up to 7 per card.)	

There may be from one to seven pairs of variable numbers and labels on each Labels Card. If desired, only one pair may be specified on each card. However, the total number of labels appearing on all the Labels Cards must equal the number of labels specified on the problem card.

It is not necessary to label all the variables. Those labeled may be listed in any order. EXAMPLE: Suppose the number of variables to be labeled as specified on the Problem Card is 8. Then the Labels Cards might be punched as:

```
LABELS  10 HEIGHT 07WEIGHT  06  AGE  11TYPE  17GROUP  03STATUS
LABELS  01GAIN  08SYSTEM
```

VARIABLE FORMAT CARDS (FOR INPUT)

The word "FORMAT" usually refers to the arrangement of information keypunched on a card. The format of a data card is a sequence of fields (variables), each of which occupies one or more columns. For the computer program a format is a set of specifications according to which information is read into the program from punched cards. The specifications tell the program which parts (or columns) of the card to skip, which parts to regard as all one number, and which parts to regard as several numbers in a row. For instance, it is the format which tells the program whether a card punched "345890021" is to be read in as "34.5, 890.0, .021", or "34., 9002.1", or "598.002", or "3, 4, 58, 90, 0, 2, 1", etc. It does this by giving the program a sequence of specifications which indicate the size of a field and

the method of handling that field (i.e., skipping it, entering it into the computer as a whole number, entering it into the computer as a number with two decimal digits, etc.).

The format also tells that program how to read in a certain set of cards when more than one are required to contain all the data for one case. The format describes the variables for each case. Each successive case is assumed to have the same format.

If the format for the program is fixed in advance, all data would have to be punched on cards in the same way for every study. Since this is not usually convenient, the program has been written so that the user may vary the format according to his preference for a particular study. For this reason, they are referred to as "Variable Formats". The program is informed of the format which is to be used by Variable Format Cards. The user must specify on the Problem Card the number of cards used to keypunch the variable format.

In addition to providing an economical method of preparing data input cards (by defining fields to be as small as possible, or "packing" the data), the variable format permits considerable freedom in controlling data input.

For instance:

- It allows the user to select for each case only those cards which have fields of interest. (See examples i, iii, iv below.)
- It allows the user to select only those fields of interest from among the fields of each card. (See examples ii, iii, iv.)
- It allows the user to scale the data input, i.e., shift the decimal point.

F-TYPE VARIABLE FORMAT

The F-Type format is the most frequently used in the program. It is required when the decimal point is keypunched on the card or when the decimal point is to be placed by the program. All data input values must be signed (+) or unsigned numbers with or without a decimal point punched.

SPECIFICATIONS:

1. "nFw.d" - F is the floating point (decimal) indicator; n is the number of fields of width W (includes sign and decimal point if punched); and d is the number of digits to the right of the decimal point if the decimal point is not punched ($0 \leq d \leq w$). If the decimal is punched, d is ignored. If n is not specified, it is assumed to be 1.
2. "sPnFw.d" - P is the scale indicator; s is a scale factor (explained below); and n, w, and d are defined in specification 1.
3. "mX" (Alphabetic X) - X is the skip indicator, and m is the number of columns to be skipped.

4. "/" - (slash) indicates "go to the next data card." Depending on its location in the format statement, the "/" will either direct the program to go immediately to the next card (ignoring any further information on the current card) or skip one card altogether. For example, if a format begins with "/", the program will automatically skip the first card, read the second, skip the third, etc. (See examples i, iii, iv.) "/" indicates "go to the card after next." Two slashes "//" will direct the program to skip two cards. Any number of slashes may be used.

The format is keypunched beginning with a left parenthesis, followed by a sequence of specifications and closed by a right parenthesis. Specifications 1, 2, and 3 are followed by a comma, except preceding a slash or right-hand parenthesis. Blank columns within the format are ignored.

EXAMPLES:

(i) (12F3.0, F4.0, 11F2.0/) punched in the first 21 columns of the variable format card, will describe 12 three-column fields followed by 1 four-column field, followed by 11 two-column fields, followed by an instruction to skip the second card, read the third, skip the fourth, etc.

(ii) (10x, F6.0, 2x, 2F3.0) punched in the first 19 columns, will instruct the program to direct entry of data from each card as follows:

1. Skip 10 columns.
2. Pick up a six-digit field in Column 11-16.
3. Skip 2 columns.
4. Pick up 2 three-digit fields in Columns 19-21 and 22-24.

(iii) (5X, 2F6.0, F1.0, 3X, F5.0/5X, F6.0) punched in the first 31 columns, will instruct the program to direct entry of data from each pair of cards as follows:

1. Skip 5 columns.
2. Pick up 2 six-digit fields in Columns 6-11 and 12-17.
3. Pick up a one-digit field in Column 18.
4. Skip three columns (Columns 19-21).
5. Pick up a five-digit field in Columns 22-26.
6. Go to second data card.
7. Skip 5 columns.
8. Pick up a six-digit field in Columns 6-11 of second card.
9. Repeat for each pair of data cards.

(iv) (5X, 2F6.0, F1.0, 3X, F5.0//5X, F6.0/F4.0, 2X, F1.0) punched in the first 45 columns, will instruct the program to direct entry of data from each set of four cards as follows:

- 1-5. Same as example (iii).
6. Skip second card and go to third card.
7. Skip 5 columns.
8. Pick up a six-digit field in Columns 6-11 of third card.
9. Go to fourth card.
10. Pick up a four-digit field in Column 1-4 of fourth card.
11. Skp two columns.
12. Pick up a one-digit field in Column 7.
13. Repeat for each set of four cards.

SCALING

Scaling may be indicated by using either the "nFw.d" specification or the "sPnFw.d" specification.

"nFw.d" SPECIFICATION

When the decimal point is not punched, the d of the above specification instructs the program to divide the whole picked up by 10^d . For example, F6.1 will specify that the number picked up in a six-column field be divided by 10, F6.2 will specify division by 100, and F6.6 will specify division by 1,000,000.

$$\text{Stored number} = \text{punched number} / 10^d.$$

EXAMPLES:

<u>Punched Number</u>	<u>Format Specification</u>	<u>Stored Number</u>
2468	F4.0	2468.0
3691	F4.1	369.1
4810	F4.3	4.810
4911.32	F7.0	4911.32
172115	F6.6	0.172115

"sPnFw.d" SPECIFICATION

Whether the decimal point is punched or not, the s of the above specification instructs the program to divide the number picked up by

10^S. For example, 2PF6.0 will specify division by 100, -2PF6.0 will specify division by .01. If the decimal point is punched:

$$\text{Stored number} = \text{Punched number}/10^S$$

If the decimal is not punched:

$$\text{Stored number} = \text{Punched number}/10^{S+d}$$

EXAMPLES:

<u>Punched Number</u>	<u>Format Specification</u>	<u>Stored Number</u>
7432	1PF4.0	743.2
74.32	-5PF5.0	7432000.0
7432	2PF4.3	0.07432
7432	1P2F2.0	7.4 & 3.2
7432	2P2F2.1	0.074 & 0.032
7432	OPF4.1	743.2
7.432	-3PF5.0	7432.0

MIXED "nFw.d" AND "sPnFw.d" SPECIFICATIONS:

Once the sPnFw.d specification has been used, it will hold for all Fw.d specifications to the right of it until another sPnFw.d is encountered. If the sPnFw.d specification is not necessary to the right of its occurrence within the variable format statement, then OPFw.d should be used for the next specification to the right, which will hold then for the remaining specifications.

EXAMPLES:

(v) (2F3.1, 2x, F4.2, -6PF3.0, F4.0) - The program interprets the last field as -6PF4.0.

(vi) (2F3.1, 2X, F4.2, -6PF3.0, OPF3.0) - The program interprets the last field as F3.0.

(vii) (1PF3.0, F2.0, OPF3.1, F4.2, F4.0) - The program interprets the second field as 1PF2.0.

DATA INPUT CARDS

The form of the data input when Sample Size Cards are prepared is illustrated in the following example:

		<u>VARIABLES</u>			
		1	2	...	v
Treatment Group 1	<u>CASES</u>				
	1	$X_{1,1,1}$	$X_{1,1,2}$	...	$X_{1,1,v}$
	2	$X_{1,2,1}$	$X_{1,2,2}$	...	$X_{1,2,v}$

	n_1	$X_{1,n_1,1}$	$X_{1,n_1,2}$	...	$X_{1,n_1,v}$

		<u>VARIABLES</u>			
		1	2	...	v
Treatment Group 2	<u>CASES</u>				
	1	$X_{2,1,1}$	$X_{2,1,2}$	...	$X_{2,1,v}$
	2	$X_{2,2,1}$	$X_{2,2,2}$	...	$X_{2,2,v}$

	n_2	$X_{2,n_2,1}$	$X_{2,n_2,2}$	...	$X_{2,n_2,v}$

...

		<u>VARIABLES</u>			
		1	2	...	v
Treatment Group t	<u>CASES</u>				
	1	$X_{t,1,1}$	$X_{t,1,2}$	...	$X_{t,1,v}$
	2	$X_{t,2,1}$	$X_{t,2,2}$	...	$X_{t,2,v}$

	n_t	$X_{t,n_t,1}$	$X_{t,n_t,2}$	...	$X_{t,n_t,v}$

The preparation of data input on cards is as follows:

1. The cards must be arranged in consecutive treatment groups.
2. Within each treatment group the cards must be arranged in consecutive cases.
3. For each case the variables must be keypunched in fields from left to right across the card (and on to successive cards, if necessary).
4. Each case must begin on a new card.

If the data input is from a prepared BCD tape, the arrangement of data must be in the same form as indicated above. Each case must be a logical record with the last record consisting of the last case of the t^{th} treatment group.

When Group Definition Cards are used, the data is prepared in a similar manner as above considering the data as a single treatment group.

COVARIATE SELECTION CARDS

The indices to be used in specifying the covariates are the indices corresponding to the variables after transgeneration.

- | | |
|----------------|--------------------------------------------------------------|
| Columns 1-6 | CVRSEL (Mandatory) |
| Columns 7, 8 | Number of Covariates for this problem ($1 \leq p \leq 35$) |
| Columns 9, 10 | Index of the 1st Covariate |
| Columns 11, 12 | Index of the 2nd Covariate |
| . . . | |
| Columns 71, 72 | Index of the 32nd Covariate |

If there are more than 32 Covariates, they are specified on a second Covariate Selection Card as follows:

- | | |
|----------------|-----------------------------|
| Columns 1-6 | CVRSEL (Mandatory) |
| Columns 7, 8 | Index of the 33rd Covariate |
| Columns 9, 10 | Index of the 34th Covariate |
| Columns 11, 12 | Index of the 35th Covariate |

TAPE INPUT

The program has provision for input of data prepared on tape or disk by means of an alternate input tape. Use of tapes or disks for data provide a very compact storage of data files. One data file may be reread several times to allow several analyses from the same data file by rewinding the alternate input tape.

When the data input consists of p variables on n cases written in consecutive Logical records on magnetic tape in Binary Coded Decimal (BCD) form, a special data input tape may be used. The logical record will usually be the equivalent of one card. When a binary tape is used for data input, it is assumed to be in the standard FORTRAN binary tape format. The user will specify which tape drive is to receive the special data tape.

The program uses several tapes for intermediate storage. Tape numbers 2, 3, 7, 8, and 9, in addition to 5 and 6, may not be specified as alternate input or output tapes for the program.

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

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LIST OF SYMBOLS

a, b, k, m	covariate designators
A_k	Total regression coefficient of k^{th} covariate
B_k, β_k	Error (Within) regression coefficient of k^{th} covariate
e_{ij}	residual variate error for the j^{th} sample of i^{th} treatment group
E_{about}	Error (Within) sum of squared deviation about regression equation
E_{due}	Error (Within) sum of squared deviation due to regression equation
E_{km}	inverse of $E_{XX_{km}}$ matrix
$E_{XX_{ab}}$	Error (Within) sum of squared deviation for a^{th} and b^{th} covariates
E_{XY_k}	Error (Within) sum of squared deviation for variate and k^{th} covariate
E_{YY}	Error (Within) sum of squared deviation for variates
i	Treatment group designator
j	treatment group sample size designator
n_i	sample size of the i^{th} treatment group
N	total number of cases
S_{about}	Total sum of squared deviation about regression equation
S_{due}	Total sum of squared deviation due to regression equation
S_{km}	inverse of $S_{XX_{km}}$ matrix
$S_{XX_{ab}}$	Total sum of squared deviation for a^{th} and b^{th} covariates
S_{XY_k}	Total sum of squared deviation for variate and k^{th} covariate

S_{YY}	Total sum of squared deviation for variate
$SE(A_k)$	standard error of k^{th} total regression coefficient
$SE(\text{ADJ } Y_{i.})$	standard error of adjusted variate mean for the i^{th} treatment group
$SE(B_k)$	standard error of k^{th} error (within) regression coefficient
t_k	computed T-value of k^{th} regression coefficient
$T_{XY_{ab}}$	Treatment (Between) sum of squared deviation for a^{th} and b^{th} covariates
T_{XY_k}	Treatment (Between) sum of squared deviation for variate and k^{th} covariate
T_{YY}	Treatment (Between) sum of squared deviation for variates
X_{ijk}	k^{th} covariate for the j^{th} sample of i^{th} treatment group
$X_{i.k}$	k^{th} covariate mean for the i^{th} treatment group
$X_{..k}$	k^{th} covariate mean, ingoring treatments
Y_{ij}	variate for the j^{th} sample of i^{th} treatment group
$Y_{i.}$	variate mean for the i^{th} treatment group
α_i	differential effect on mean for the i^{th} treatment group
μ	overall mean
$\mu + \alpha_i, \text{ADJ}(Y_{i.})$	adjusted covariate mean for the i^{th} treatment group

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DISCUSSION

This section presents the computational procedure for the Analysis-of-Covariance statistical model together with the intermediate residual calculations. The first step in the formulation of the statistical model equations is the calculation of the variate and covariate group means. Next, the cross product deviation matrices for the Total, Treatment, and Error solutions are formed and inverted to solve for the regression coefficients. The final step in the formulation of the model equations is the solution of the adjusted variate group means. The inclusion in this report of the model equations and associated correlation equations is not meant as a full treatise on the subject. A thorough treatment of the governing statistical equations can be found in any standard text (i.e., references (b) and (c)).

GOVERNING EQUATIONSCOMPUTATIONAL PROCEDURE

Statistical Model:

$$Y_{ij} = \mu + \alpha_i + \beta_1 (X_{ij1} - X_{i.1}) + \dots + \beta_p (X_{ijp} - X_{i.p}) + e_{ij}$$

Notation:

$$X_{ijk} \text{ (k}^{\text{th}} \text{ Covariate), } Y_{ij} = X_{ij(p+1)} \text{ (Variate)}$$

$$i = 1, 2, \dots, t \quad \text{(Treatment Groups)}$$

$$j = 1, 2, \dots, n_i \quad \text{(Sample size of the } i^{\text{th}} \text{ treatment group)}$$

$$k = 1, 2, \dots, p \quad \text{(Covariates)}$$

$$m = 1, 2, \dots, p \quad \text{(Covariates)}$$

$$a = 1, 2, \dots, p+1 \quad \text{(Covariates + 1 variate)}$$

$$b = 1, 2, \dots, p+1 \quad \text{(Covariates + 1 variate)}$$

Step 1

$$1. N = \sum_{i=1}^t n_i \quad \text{(Total number of cases)}$$

$$2. \bar{Y}_{i.} = \frac{1}{n_i} \sum_{j=1}^{n_i} Y_{ij} \quad \text{(Variate mean for the } i^{\text{th}} \text{ group)}$$

$$3. \bar{X}_{i.k} = \frac{1}{n_i} \sum_{j=1}^{n_i} X_{ijk} \quad \text{(Covariate means for the } i^{\text{th}} \text{ group and } k^{\text{th}} \text{ covariate)}$$

$$4. \bar{X}_{..k} = \frac{1}{N} \sum_{i=1}^t \sum_{j=1}^{n_i} X_{ijk} \quad \text{(kth Covariate mean, ignoring treatments)}$$

(2) and (3) are printed under the heading variable means for each group.

Step 2. Sums of Squared Deviation

1. Total

$$S_{XX_{ab}} = \sum_{i=1}^t \sum_{j=1}^{n_i} X_{ija} X_{ijb} - \frac{\left(\begin{array}{cc} t & n_i \\ \Sigma & \Sigma^i \\ i=1 & j=1 \end{array} X_{ija} \right) \left(\begin{array}{cc} t & n_i \\ \Sigma & \Sigma^i \\ i=1 & j=1 \end{array} X_{ijb} \right)}{N}$$

$$S_{XY_k} = S_{XX_{k(p+1)}}$$

$$S_{YY} = S_{XX_{(p+1)(p+1)}}$$

2. Treatment (Between)

$$T_{XX_{ab}} = \sum_{i=1}^t \frac{\left(\begin{array}{cc} n_i & \\ \Sigma^i & \\ j=1 & \end{array} X_{ija} \right) \left(\begin{array}{cc} n_i & \\ \Sigma^i & \\ j=1 & \end{array} X_{ijb} \right)}{n_i} - \left(\begin{array}{cc} t & n_i \\ \Sigma & \Sigma^i \\ i=1 & j=1 \end{array} X_{ija} \right)$$

$$* \frac{\left(\begin{array}{cc} t & n_i \\ \Sigma & \Sigma^i \\ i=1 & j=1 \end{array} X_{ijb} \right)}{N}$$

$$T_{XY_k} = T_{XX_{k(p+1)}}$$

$$T_{YY} = T_{XX_{(p+1)(p+1)}}$$

3. Error (Within)

$$E_{XX_{ab}} = S_{XX_{ab}} - T_{XX_{ab}}$$

$$E_{XY_{k(p+1)}} = S_{XY_{k(p+1)}} - T_{XY_{k(p+1)}}$$

$$E_{YY} = S_{YY} - T_{YY}$$

(1), (2), and (3) are printed under the heading Sums of Squares and Cross Product Matrix for Total, Treatment, and Error.

Step 3. Regression Coefficients

1. Matrices $S_{XX_{km}}$ and $E_{XX_{km}}$ are inverted.

$$\text{Let } S_{km} = (S_{XX_{km}})^{-1}, E_{km} = (E_{XX_{km}})^{-1}$$

2. $B_k = \sum_{m=1}^P (E_{km})(E_{XY_m})$ (Error Coefficients)

3. $A_k = \sum_{m=1}^P (S_{km})(S_{XY_m})$ (Total Coefficients)

(1) is printed under the heading, Inverse of the Covariates Cross Product Matrix for Total and Error.

Step 4. Regression Sums of Squares

- (1) Error (Within)

$$E_{\text{due}} = \sum_{k=1}^P B_k E_{XY_k}$$

$$E_{\text{about}} = E_{YY} - E_{\text{due}}$$

2. Total

$$S_{\text{due}} = \sum_{k=1}^P A_k S_{XY_k}$$

$$S_{\text{about}} = S_{YY} - S_{\text{due}}$$

(1) and (2) are printed in the Analysis of Covariance Table.

Step 5. Standard Errors of Regression Coefficients and computed t - VALUES

	<u>STANDARD ERRORS</u>	<u>COMPUTED t - VALUES</u>
ERROR:	$SE(B_k) = \sqrt{E_{\text{about}}} \cdot E_{kk}$	$t_k = \frac{B_k}{SE(B_k)}$
TOTAL:	$SE(A_k) = \sqrt{S_{\text{about}}} \cdot S_{kk}$	$t_k = \frac{A_k}{SE(A_k)}$

These and (1) and (3) from Step 3 are printed in the output under the heading TABLE OF COEFFICIENTS, STANDARD ERRORS AND COMPUTED T-VALUES.

Step 6. Adjusted Means and Standard Errors of Adjusted Means

(1) Adjusted Means

$$\text{ADJ } (Y_{i.}) = Y_{i.} - \sum_{m=1}^P B_m (X_{i.m} - X_{..m})$$

(2) Standard Errors of Adjusted Means

$$\text{SE}(\text{ADJ } Y_{i.}) = \left\{ E_{\text{due}} \left[\frac{1}{n_i} + \sum_{k=1}^P \sum_{m=1}^P (X_{i.k} - X_{..k}) E_{km} (X_{i.m} - X_{..m}) \right] \right\}^{1/2}$$

These are printed in the output under the heading, Table of Adjusted Means and Standard Errors.

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