GGGGGGGGGG EEEEEEEEEEEE NN NN OOOOOOOO VV VV AAAAAAAAAA

 GGGGGGGGGGGG EEEEEEEEEEEE NNN NN OOOOOOOOOO VV VV AAAAAAAAAAAA

 GG G EE NNNN NN OO OO VV VV AA AA

 GG EE NN NN NN OO OO VV VV AA AA

 GG EE NN NN NN OO OO VV VV AA AA

 GG EE NN NN NN OO OO VV VV AA AA

 GG EE NN NN NN OO OO VV VV AA AA

 GG EEEEEEEE NN NN NN OO OO VV VV AA AA

 GG GGGG EEEEEEEE NN NNNN OO OO VV VV AAAAAAAAAAAA

 GG GGGG EE NN NNN OO OO VV VV AAAAAAAAAAAA

 GG GG EE NN NN OO OO VV VV AA AA

 GG GG EE NN NN OO OO VV VV AA AA

 GG GG EE NN NN OO OO V V AA AA

 GG GG EE NN NN OO OO VVVV AA AA

 GGGGGGGGGGGG EEEEEEEEEEEE NN NN OOOOOOOOOO VVVV AA AA

 GGGGGGGGGG EEEEEEEEEEEE NN NN OOOOOOOO VV AA AA

 A GENERAL PURPOSE ANALYSIS OF VARIANCE SYSTEM

 --- - --

 GENOVA IS A FORTRAN 77 PROGRAM FOR ANALYSIS OF VARIANCE

 AND GENERALIZABILITY ANALYSES WITH BALANCED DESIGNS

 AUTHORS

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 VERSION 3.1

 January, 2001

 GENOVA has been checked for accuracy of output, however the authors

 can make no assurances that the program is totally without error.

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 Development Center (NPRDC); Robert L. Brennan Principal Investigator. GENOVA does not necessarily

 reflect NPRDC positions or policy, and no official endorsement should be inferred

 GENOVA VERSION 3.1 PAGE 1

 CONTROL CARD INPUT LISTING

 COLUMN 11111111112222222222333333333344444444445555555555666666666677777777778

 12345678901234567890123456789012345678901234567890123456789012345678901234567890

 STUDY G-Study of 2000 Summer Olympic Diving Results

 COMMENT Men's Finals

 COMMENT # RECORDS = 12

 COMMENT 4 TASKS, 7 JUDGES

 COMMENT # VALUES PER RECORD = 28

 OPTIONS RECORDS ALL

 EFFECT \* P 12 0

 EFFECT + T 4 0

 EFFECT + J 7 0

 FORMAT (28F3.1)

 PROCESS

 GENOVA VERSION 3.1 PAGE 2

 G STUDY G-Study of 2000 Summer Olympic Diving Results

 EXPANDED MAIN AND INTERACTION EFFECT TABLE

 (\*\* = INFINITE) P T J TOTAL DEGREES

 SAMPLE SIZE 12 4 7 PRIMARY NUMBER OF

 UNIVERSE SIZE \*\*\*\* \*\*\*\* \*\*\*\* INDICES INDICES FREEDOM

 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

 \* \* \* \* \*

 \* P \* 1 \* 0 \* 0 \* 1 1 11

 \* T \* 0 \* 1 \* 0 \* 1 1 3

 \* J \* 0 \* 0 \* 1 \* 1 1 6

 \* \* \* \* \*

 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

 \* \* \* \* \*

 \* PT \* 1 \* 1 \* 0 \* 2 2 33

 \* PJ \* 1 \* 0 \* 1 \* 2 2 66

 \* TJ \* 0 \* 1 \* 1 \* 2 2 18

 \* \* \* \* \*

 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

 \* \* \* \* \*

 \* PTJ \* 1 \* 1 \* 1 \* 3 3 198

 \* \* \* \* \*

 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

 GENOVA VERSION 3.1 PAGE 3

 G STUDY G-Study of 2000 Summer Olympic Diving Results

 INPUT RECORD LISTING WITH RECORD MEANS

 RECORD # 1 8.00000 9.00000 8.50000 8.50000 8.50000 8.50000 8.50000 8.50000

 8.00000 8.00000 9.00000 8.00000 8.00000 8.00000 9.00000 9.00000

 9.00000 9.00000 9.50000 9.00000 9.00000 7.50000 8.50000 8.00000

 9.00000 8.00000 8.00000 7.50000 8.46429

 RECORD # 2 8.50000 9.00000 8.50000 9.00000 9.00000 9.00000 9.00000 8.50000

 8.00000 8.50000 8.50000 8.00000 8.00000 8.50000 9.50000 8.50000

 9.00000 9.00000 9.00000 8.00000 8.50000 9.00000 8.50000 8.50000

 8.50000 8.00000 8.00000 8.00000 8.57143

 RECORD # 3 8.50000 9.00000 9.50000 9.50000 9.00000 8.50000 9.50000 7.00000

 7.50000 8.50000 7.50000 7.00000 8.50000 9.00000 8.50000 9.00000

 9.50000 9.50000 8.50000 9.00000 9.00000 7.00000 7.00000 7.50000

 8.50000 8.00000 7.50000 8.00000 8.39286

 RECORD # 4 8.50000 8.50000 8.50000 9.00000 9.00000 8.50000 8.50000 6.50000

 6.00000 5.50000 7.00000 6.50000 6.50000 6.00000 6.50000 7.00000

 7.50000 7.00000 5.00000 7.00000 7.00000 8.00000 8.50000 8.00000

 8.50000 8.50000 8.50000 8.00000 7.48214

 RECORD # 5 7.50000 7.50000 7.50000 8.50000 8.00000 7.50000 8.00000 6.50000

 6.00000 6.00000 7.50000 7.00000 6.50000 5.00000 7.50000 7.50000

 7.50000 8.00000 7.00000 7.50000 7.00000 8.00000 8.00000 8.00000

 8.50000 7.50000 8.00000 8.00000 7.39286

 RECORD # 6 8.00000 8.50000 8.00000 8.50000 8.00000 8.00000 8.00000 6.00000

 6.00000 5.50000 4.50000 5.50000 5.50000 5.00000 6.50000 6.50000

 6.50000 5.50000 6.00000 5.50000 6.50000 8.00000 8.80000 8.00000

 8.50000 9.00000 8.00000 8.00000 7.01071

 RECORD # 7 7.50000 7.50000 7.50000 7.00000 7.50000 7.50000 7.00000 7.50000

 7.50000 7.00000 6.50000 7.50000 6.00000 7.00000 7.00000 7.00000

 7.50000 7.00000 7.00000 7.50000 7.00000 7.50000 8.00000 8.00000

 7.50000 7.50000 8.00000 7.50000 7.30357

 RECORD # 8 7.50000 7.50000 8.00000 7.50000 8.00000 7.00000 8.00000 7.50000

 7.00000 7.00000 7.50000 7.00000 7.00000 7.00000 8.00000 8.00000

 8.00000 8.00000 8.50000 8.00000 8.00000 7.00000 7.00000 6.50000

 7.00000 7.00000 7.00000 6.50000 7.42857

 RECORD # 9 7.50000 7.50000 7.50000 8.00000 7.50000 7.00000 7.00000 7.00000

 7.00000 7.50000 7.50000 7.00000 7.00000 7.00000 7.50000 7.00000

 7.00000 7.00000 7.50000 7.00000 7.00000 7.00000 7.00000 7.00000

 7.50000 8.00000 7.00000 7.00000 7.23214

 RECORD # 10 7.50000 7.50000 7.50000 7.00000 7.50000 8.00000 8.00000 7.00000

 6.50000 7.50000 6.50000 7.00000 6.50000 7.00000 7.00000 7.50000

 7.00000 7.00000 6.50000 7.00000 7.00000 4.50000 5.50000 5.50000

 5.00000 5.00000 6.00000 6.00000 6.69643

 GENOVA VERSION 3.1 PAGE 4

 G STUDY G-Study of 2000 Summer Olympic Diving Results

 INPUT RECORD LISTING WITH RECORD MEANS

 RECORD # 11 8.00000 8.00000 7.50000 8.00000 8.00000 7.50000 7.00000 6.00000

 7.50000 7.50000 7.50000 6.50000 7.00000 7.00000 7.00000 6.50000

 6.50000 6.50000 6.50000 6.50000 6.50000 6.00000 6.50000 6.00000

 5.50000 5.50000 5.50000 6.00000 6.78571

 RECORD # 12 7.00000 7.50000 7.50000 7.50000 7.50000 7.50000 7.50000 6.00000

 7.50000 7.50000 7.50000 6.50000 7.00000 7.00000 6.50000 5.50000

 5.50000 6.00000 6.00000 5.50000 6.00000 7.00000 7.50000 7.50000

 7.50000 7.50000 7.00000 7.50000 6.91071

 GENOVA VERSION 3.1 PAGE 5

 G STUDY G-Study of 2000 Summer Olympic Diving Results

 CELL MEAN SCORES

 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

 \*\*\* GRAND MEAN = 7.4726190 \*\*\*

 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

 MEAN SCORES FOR EFFECT: T SUBSCRIPT NOTATION: (T)

 (1) = 8.011905 (2) = 7.047619 (3) = 7.410714 (4) = 7.420238

 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

 MEAN SCORES FOR EFFECT: J SUBSCRIPT NOTATION: (J)

 (1) = 7.395833 (2) = 7.527083 (3) = 7.520833 (4) = 7.625000

 (5) = 7.447917 (6) = 7.375000 (7) = 7.416667

 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

 MEAN SCORES FOR EFFECT: TJ SUBSCRIPT NOTATION: (T,J)

 (1,1) = 7.833333 (1,2) = 8.083333 (1,3) = 8.000000 (1,4) = 8.166667

 (2,1) = 7.000000 (2,2) = 7.041667 (2,3) = 7.166667 (2,4) = 7.250000

 (3,1) = 7.541667 (3,2) = 7.416667 (3,3) = 7.541667 (3,4) = 7.458333

 (4,1) = 7.208333 (4,2) = 7.566667 (4,3) = 7.375000 (4,4) = 7.625000

 (4,5) = 7.458333 (4,6) = 7.375000 (4,7) = 7.333333

 GENOVA VERSION 3.1 PAGE 6

 G STUDY G-Study of 2000 Summer Olympic Diving Results

 ANOVA TABLE

 (\*\* = INFINITE) P T J

 SAMPLE SIZE 12 4 7

 UNIVERSE SIZE \*\*\*\* \*\*\*\* \*\*\*\*

 ------------------------------------------------------------------------------------------------------------------

 DEGREES SUMS OF SUMS OF (QF = QUASI F RATIO)

 OF SQUARES FOR SQUARES FOR MEAN F F-TEST DEGREES OF FREEDOM

 EFFECT FREEDOM MEAN SCORES SCORE EFFECTS SQUARES STATISTIC NUMERATOR DENOMINATOR

 ------------------------------------------------------------------------------------------------------------------

 P 11 18894.85500 132.60310 12.05483 3.48910 QF 11 QF 34 QF

 T 3 18802.40643 40.15452 13.38484 3.99142 QF 3 QF 32 QF

 J 6 18764.54042 2.28851 .38142 1.99530 QF 6 QF 22 QF

 ------------------------------------------------------------------------------------------------------------------

 PT 33 19046.73429 111.72476 3.38560 21.99019 33 198

 PJ 66 18911.88500 14.74149 .22336 1.45074 66 198

 TJ 18 18806.88667 2.19173 .12176 .79087 18 198

 ------------------------------------------------------------------------------------------------------------------

 PTJ 198 19096.44000 30.48399 .15396

 ------------------------------------------------------------------------------------------------------------------

 MEAN 18762.25190

 ------------------------------------------------------------------------------------------------------------------

 TOTAL 335 334.18810

 ------------------------------------------------------------------------------------------------------------------

 NOTE: FOR GENERALIZABILITY ANALYSES, F-STATISTICS SHOULD BE IGNORED

 GENOVA VERSION 3.1 PAGE 7

 G STUDY G-Study of 2000 Summer Olympic Diving Results

 G STUDY RESULTS

 (\*\* = INFINITE) P T J

 SAMPLE SIZE 12 4 7

 UNIVERSE SIZE \*\*\*\* \*\*\*\* \*\*\*\* QFM = QUADRATIC FORM

 -----------------------------------------------------------------------------

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

 DEGREES - - - - - - - - - - - - - - - - - - - - - - -

 OF USING USING EMS STANDARD

 EFFECT FREEDOM ALGORITHM EQUATIONS ERROR

 -----------------------------------------------------------------------------

 P 11 .3071368 .3071368 .1713297

 T 3 .1194219 .1190386 .1012383

 J 6 .0039637 .0032930 .0041435

 -----------------------------------------------------------------------------

 PT 33 .4616628 .4616628 .1156370

 PJ 66 .0173491 .0173491 .0103209

 TJ 18 (0.0) (0.0) .0034557

 -----------------------------------------------------------------------------

 PTJ 198 .1539595 .1539595 .0153960

 -----------------------------------------------------------------------------

 NOTE: THE "ALGORITHM" AND "EMS" ESTIMATED VARIANCE COMPONENTS WILL BE

 IDENTICAL IF THERE ARE NO NEGATIVE ESTIMATES

 GENOVA VERSION 3.1 PAGE 8

 G STUDY G-Study of 2000 Summer Olympic Diving Results

 EXPECTED MEAN SQUARE EQUATIONS

 (\*\* = INFINITE) P T J

 SAMPLE SIZE 12 4 7

 UNIVERSE SIZE \*\*\*\* \*\*\*\* \*\*\*\*

 EMS(P) = 1.00\*VC(PTJ) + 4.00\*VC(PJ) + 7.00\*VC(PT) + 28.00\*VC(P)

 EMS(T) = 1.00\*VC(PTJ) + 12.00\*VC(TJ) + 7.00\*VC(PT) + 84.00\*VC(T)

 EMS(J) = 1.00\*VC(PTJ) + 12.00\*VC(TJ) + 4.00\*VC(PJ) + 48.00\*VC(J)

 EMS(PT) = 1.00\*VC(PTJ) + 7.00\*VC(PT)

 EMS(PJ) = 1.00\*VC(PTJ) + 4.00\*VC(PJ)

 EMS(TJ) = 1.00\*VC(PTJ) + 12.00\*VC(TJ)

 EMS(PTJ) = 1.00\*VC(PTJ)

 GENOVA VERSION 3.1 PAGE 9

 G STUDY G-Study of 2000 Summer Olympic Diving Results

 VARIANCE - COVARIANCE MATRIX FOR ESTIMATED VARIANCE COMPONENTS (V)

 P T J PT PJ TJ PTJ

 P .0293539

 T .0002786 .0102492

 J .0000013 .0000004 .0000172

 PT -.0033430 -.0011143 -.0000007 .0133719

 PJ -.0000152 -.0000007 -.0000089 .0000085 .0001065

 TJ -.0000007 -.0000017 -.0000030 .0000028 .0000049 .0000119

 PTJ .0000085 .0000028 .0000049 -.0000339 -.0000593 -.0000198 .0002370

 GENOVA VERSION 3.1 PAGE 10

 CONTROL CARD INPUT LISTING

 COLUMN 11111111112222222222333333333344444444445555555555666666666677777777778

 12345678901234567890123456789012345678901234567890123456789012345678901234567890

 COMMENT STEP TWO

 COMMENT D STUDY 1 VARYING THE NUMBER OF JUDGES

 COMMENT

 DSTUDY P x T x J DESIGN

 DEFFECT $ P

 DEFFECT T 4

 DEFFECT J 1 3 5 7

 ENDDSTUDY

 GENOVA VERSION 3.1 PAGE 11

 D STUDY P x T x J DESIGN

 D STUDY DESIGN NUMBER 001-001

 OBJECT OF MEASUREMENT : P FACETS : T J

 G STUDY POPULATION SIZE : INFINITE G STUDY UNIVERSE SIZES : INFINITE INFINITE

 D STUDY POPULATION SIZE : INFINITE D STUDY UNIVERSE SIZES : INFINITE INFINITE

 D STUDY SAMPLE SIZE : 12 D STUDY SAMPLE SIZES : 4 1

 ----------------------------------------------------------------------------------------------------------------------------------

 VARIANCE COMPONENTS IN TERMS OF VARIANCE COMPONENTS IN TERMS OF

 G STUDY UNIVERSE (OF ADMISSIBLE OBSERVATIONS) SIZES D STUDY UNIVERSE (OF GENERALIZATION) SIZES

 ---------------------------------------------------------- -----------------------------------------------------------

 VARIANCE COMPONENTS VARIANCE COMPONENTS

 VARIANCE FINITE D STUDY FOR MEAN SCORES VARIANCE FINITE D STUDY FOR MEAN SCORES

 COMPONENTS UNIVERSE SAMPLING -------------------------- COMPONENTS UNIVERSE SAMPLING ---------------------------

 FOR SINGLE COR- FRE- STANDARD FOR SINGLE COR- FRE- STANDARD

 EFFECT OBSERVATIONS RECTIONS QUENCIES ESTIMATES ERRORS OBSERVATIONS RECTIONS QUENCIES ESTIMATES ERRORS

 ----------------------------------------------------------------------------------------------------------------------------------

 P .30714 1.0000 1 .30714 .17133 .30714 1.0000 1 .30714 .17133

 T .11904 1.0000 4 .02976 .02531 .11904 1.0000 4 .02976 .02531

 J .00329 1.0000 1 .00329 .00414 .00329 1.0000 1 .00329 .00414

 PT .46166 1.0000 4 .11542 .02891 .46166 1.0000 4 .11542 .02891

 PJ .01735 1.0000 1 .01735 .01032 .01735 1.0000 1 .01735 .01032

 TJ .00000E+00 1.0000 4 .00000E+00 .00086 .00000E+00 1.0000 4 .00000E+00 .00086

 PTJ .15396 1.0000 4 .03849 .00385 .15396 1.0000 4 .03849 .00385

 ----------------------------------------------------------------------------------------------------------------------------------

 QFM = QUADRATIC FORM

 ----------------------------------------------------------------------------------------------------------------------------------

 STANDARD

 STANDARD ERROR OF

 VARIANCE DEVIATION VARIANCE

 UNIVERSE SCORE .30714 .55420 .17133

 EXPECTED OBSERVED SCORE .47839 .69166 .16907

 LOWER CASE DELTA .17125 .41383 .03045 GENERALIZABILITY COEFFICIENT = .64202 ( 1.79345)

 UPPER CASE DELTA .20431 .45200 .03781 PHI = .60053 ( 1.50331)

 MEAN .07292 .27003

 ----------------------------------------------------------------------------------------------------------------------------------

 NOTE: SIGNAL/NOISE RATIOS ARE IN PARENTHESES

 GENOVA VERSION 3.1 PAGE 12

 D STUDY P x T x J DESIGN

 D STUDY DESIGN NUMBER 001-001

 VARIANCE - COVARIANCE MATRIX FOR ESTIMATED VARIANCE COMPONENTS (FOR MEAN SCORES) IN UNIVERSE OF GENERALIZATION (W)

 P T J PT PJ TJ PTJ

 P .0293539

 T .0000696 .0006406

 J .0000013 .0000001 .0000172

 PT -.0008357 -.0000696 -.0000002 .0008357

 PJ -.0000152 -.0000002 -.0000089 .0000021 .0001065

 TJ -.0000002 -.0000001 -.0000007 .0000002 .0000012 .0000007

 PTJ .0000021 .0000002 .0000012 -.0000021 -.0000148 -.0000012 .0000148

 GENOVA VERSION 3.1 PAGE 13

 D STUDY P x T x J DESIGN

 D STUDY DESIGN NUMBER 001-002

 OBJECT OF MEASUREMENT : P FACETS : T J

 G STUDY POPULATION SIZE : INFINITE G STUDY UNIVERSE SIZES : INFINITE INFINITE

 D STUDY POPULATION SIZE : INFINITE D STUDY UNIVERSE SIZES : INFINITE INFINITE

 D STUDY SAMPLE SIZE : 12 D STUDY SAMPLE SIZES : 4 3

 ----------------------------------------------------------------------------------------------------------------------------------

 VARIANCE COMPONENTS IN TERMS OF VARIANCE COMPONENTS IN TERMS OF

 G STUDY UNIVERSE (OF ADMISSIBLE OBSERVATIONS) SIZES D STUDY UNIVERSE (OF GENERALIZATION) SIZES

 ---------------------------------------------------------- -----------------------------------------------------------

 VARIANCE COMPONENTS VARIANCE COMPONENTS

 VARIANCE FINITE D STUDY FOR MEAN SCORES VARIANCE FINITE D STUDY FOR MEAN SCORES

 COMPONENTS UNIVERSE SAMPLING -------------------------- COMPONENTS UNIVERSE SAMPLING ---------------------------

 FOR SINGLE COR- FRE- STANDARD FOR SINGLE COR- FRE- STANDARD

 EFFECT OBSERVATIONS RECTIONS QUENCIES ESTIMATES ERRORS OBSERVATIONS RECTIONS QUENCIES ESTIMATES ERRORS

 ----------------------------------------------------------------------------------------------------------------------------------

 P .30714 1.0000 1 .30714 .17133 .30714 1.0000 1 .30714 .17133

 T .11904 1.0000 4 .02976 .02531 .11904 1.0000 4 .02976 .02531

 J .00329 1.0000 3 .00110 .00138 .00329 1.0000 3 .00110 .00138

 PT .46166 1.0000 4 .11542 .02891 .46166 1.0000 4 .11542 .02891

 PJ .01735 1.0000 3 .00578 .00344 .01735 1.0000 3 .00578 .00344

 TJ .00000E+00 1.0000 12 .00000E+00 .00029 .00000E+00 1.0000 12 .00000E+00 .00029

 PTJ .15396 1.0000 12 .01283 .00128 .15396 1.0000 12 .01283 .00128

 ----------------------------------------------------------------------------------------------------------------------------------

 QFM = QUADRATIC FORM

 ----------------------------------------------------------------------------------------------------------------------------------

 STANDARD

 STANDARD ERROR OF

 VARIANCE DEVIATION VARIANCE

 UNIVERSE SCORE .30714 .55420 .17133

 EXPECTED OBSERVED SCORE .44117 .66420 .16888

 LOWER CASE DELTA .13403 .36610 .02908 GENERALIZABILITY COEFFICIENT = .69619 ( 2.29158)

 UPPER CASE DELTA .16489 .40606 .03671 PHI = .65068 ( 1.86272)

 MEAN .06762 .26004

 ----------------------------------------------------------------------------------------------------------------------------------

 NOTE: SIGNAL/NOISE RATIOS ARE IN PARENTHESES

 GENOVA VERSION 3.1 PAGE 14

 D STUDY P x T x J DESIGN

 D STUDY DESIGN NUMBER 001-002

 VARIANCE - COVARIANCE MATRIX FOR ESTIMATED VARIANCE COMPONENTS (FOR MEAN SCORES) IN UNIVERSE OF GENERALIZATION (W)

 P T J PT PJ TJ PTJ

 P .0293539

 T .0000696 .0006406

 J .0000004 .0000000 .0000019

 PT -.0008357 -.0000696 -.0000001 .0008357

 PJ -.0000051 -.0000001 -.0000010 .0000007 .0000118

 TJ -.0000001 .0000000 -.0000001 .0000001 .0000001 .0000001

 PTJ .0000007 .0000001 .0000001 -.0000007 -.0000016 -.0000001 .0000016

 GENOVA VERSION 3.1 PAGE 15

 D STUDY P x T x J DESIGN

 D STUDY DESIGN NUMBER 001-003

 OBJECT OF MEASUREMENT : P FACETS : T J

 G STUDY POPULATION SIZE : INFINITE G STUDY UNIVERSE SIZES : INFINITE INFINITE

 D STUDY POPULATION SIZE : INFINITE D STUDY UNIVERSE SIZES : INFINITE INFINITE

 D STUDY SAMPLE SIZE : 12 D STUDY SAMPLE SIZES : 4 5

 ----------------------------------------------------------------------------------------------------------------------------------

 VARIANCE COMPONENTS IN TERMS OF VARIANCE COMPONENTS IN TERMS OF

 G STUDY UNIVERSE (OF ADMISSIBLE OBSERVATIONS) SIZES D STUDY UNIVERSE (OF GENERALIZATION) SIZES

 ---------------------------------------------------------- -----------------------------------------------------------

 VARIANCE COMPONENTS VARIANCE COMPONENTS

 VARIANCE FINITE D STUDY FOR MEAN SCORES VARIANCE FINITE D STUDY FOR MEAN SCORES

 COMPONENTS UNIVERSE SAMPLING -------------------------- COMPONENTS UNIVERSE SAMPLING ---------------------------

 FOR SINGLE COR- FRE- STANDARD FOR SINGLE COR- FRE- STANDARD

 EFFECT OBSERVATIONS RECTIONS QUENCIES ESTIMATES ERRORS OBSERVATIONS RECTIONS QUENCIES ESTIMATES ERRORS

 ----------------------------------------------------------------------------------------------------------------------------------

 P .30714 1.0000 1 .30714 .17133 .30714 1.0000 1 .30714 .17133

 T .11904 1.0000 4 .02976 .02531 .11904 1.0000 4 .02976 .02531

 J .00329 1.0000 5 .00066 .00083 .00329 1.0000 5 .00066 .00083

 PT .46166 1.0000 4 .11542 .02891 .46166 1.0000 4 .11542 .02891

 PJ .01735 1.0000 5 .00347 .00206 .01735 1.0000 5 .00347 .00206

 TJ .00000E+00 1.0000 20 .00000E+00 .00017 .00000E+00 1.0000 20 .00000E+00 .00017

 PTJ .15396 1.0000 20 .00770 .00077 .15396 1.0000 20 .00770 .00077

 ----------------------------------------------------------------------------------------------------------------------------------

 QFM = QUADRATIC FORM

 ----------------------------------------------------------------------------------------------------------------------------------

 STANDARD

 STANDARD ERROR OF

 VARIANCE DEVIATION VARIANCE

 UNIVERSE SCORE .30714 .55420 .17133

 EXPECTED OBSERVED SCORE .43372 .65857 .16887

 LOWER CASE DELTA .12658 .35579 .02897 GENERALIZABILITY COEFFICIENT = .70814 ( 2.42636)

 UPPER CASE DELTA .15700 .39623 .03662 PHI = .66174 ( 1.95626)

 MEAN .06656 .25800

 ----------------------------------------------------------------------------------------------------------------------------------

 NOTE: SIGNAL/NOISE RATIOS ARE IN PARENTHESES

 GENOVA VERSION 3.1 PAGE 16

 D STUDY P x T x J DESIGN

 D STUDY DESIGN NUMBER 001-003

 VARIANCE - COVARIANCE MATRIX FOR ESTIMATED VARIANCE COMPONENTS (FOR MEAN SCORES) IN UNIVERSE OF GENERALIZATION (W)

 P T J PT PJ TJ PTJ

 P .0293539

 T .0000696 .0006406

 J .0000003 .0000000 .0000007

 PT -.0008357 -.0000696 .0000000 .0008357

 PJ -.0000030 .0000000 -.0000004 .0000004 .0000043

 TJ .0000000 .0000000 .0000000 .0000000 .0000000 .0000000

 PTJ .0000004 .0000000 .0000000 -.0000004 -.0000006 .0000000 .0000006

 GENOVA VERSION 3.1 PAGE 17

 D STUDY P x T x J DESIGN

 D STUDY DESIGN NUMBER 001-004

 OBJECT OF MEASUREMENT : P FACETS : T J

 G STUDY POPULATION SIZE : INFINITE G STUDY UNIVERSE SIZES : INFINITE INFINITE

 D STUDY POPULATION SIZE : INFINITE D STUDY UNIVERSE SIZES : INFINITE INFINITE

 D STUDY SAMPLE SIZE : 12 D STUDY SAMPLE SIZES : 4 7

 ----------------------------------------------------------------------------------------------------------------------------------

 VARIANCE COMPONENTS IN TERMS OF VARIANCE COMPONENTS IN TERMS OF

 G STUDY UNIVERSE (OF ADMISSIBLE OBSERVATIONS) SIZES D STUDY UNIVERSE (OF GENERALIZATION) SIZES

 ---------------------------------------------------------- -----------------------------------------------------------

 VARIANCE COMPONENTS VARIANCE COMPONENTS

 VARIANCE FINITE D STUDY FOR MEAN SCORES VARIANCE FINITE D STUDY FOR MEAN SCORES

 COMPONENTS UNIVERSE SAMPLING -------------------------- COMPONENTS UNIVERSE SAMPLING ---------------------------

 FOR SINGLE COR- FRE- STANDARD FOR SINGLE COR- FRE- STANDARD

 EFFECT OBSERVATIONS RECTIONS QUENCIES ESTIMATES ERRORS OBSERVATIONS RECTIONS QUENCIES ESTIMATES ERRORS

 ----------------------------------------------------------------------------------------------------------------------------------

 P .30714 1.0000 1 .30714 .17133 .30714 1.0000 1 .30714 .17133

 T .11904 1.0000 4 .02976 .02531 .11904 1.0000 4 .02976 .02531

 J .00329 1.0000 7 .00047 .00059 .00329 1.0000 7 .00047 .00059

 PT .46166 1.0000 4 .11542 .02891 .46166 1.0000 4 .11542 .02891

 PJ .01735 1.0000 7 .00248 .00147 .01735 1.0000 7 .00248 .00147

 TJ .00000E+00 1.0000 28 .00000E+00 .00012 .00000E+00 1.0000 28 .00000E+00 .00012

 PTJ .15396 1.0000 28 .00550 .00055 .15396 1.0000 28 .00550 .00055

 ----------------------------------------------------------------------------------------------------------------------------------

 QFM = QUADRATIC FORM

 ----------------------------------------------------------------------------------------------------------------------------------

 STANDARD

 STANDARD ERROR OF

 VARIANCE DEVIATION VARIANCE

 UNIVERSE SCORE .30714 .55420 .17133

 EXPECTED OBSERVED SCORE .43053 .65615 .16887

 LOWER CASE DELTA .12339 .35127 .02894 GENERALIZABILITY COEFFICIENT = .71339 ( 2.48910)

 UPPER CASE DELTA .15362 .39195 .03659 PHI = .66659 ( 1.99929)

 MEAN .06611 .25711

 ----------------------------------------------------------------------------------------------------------------------------------

 NOTE: SIGNAL/NOISE RATIOS ARE IN PARENTHESES

 GENOVA VERSION 3.1 PAGE 18

 D STUDY P x T x J DESIGN

 D STUDY DESIGN NUMBER 001-004

 VARIANCE - COVARIANCE MATRIX FOR ESTIMATED VARIANCE COMPONENTS (FOR MEAN SCORES) IN UNIVERSE OF GENERALIZATION (W)

 P T J PT PJ TJ PTJ

 P .0293539

 T .0000696 .0006406

 J .0000002 .0000000 .0000004

 PT -.0008357 -.0000696 .0000000 .0008357

 PJ -.0000022 .0000000 -.0000002 .0000003 .0000022

 TJ .0000000 .0000000 .0000000 .0000000 .0000000 .0000000

 PTJ .0000003 .0000000 .0000000 -.0000003 -.0000003 .0000000 .0000003

 GENOVA VERSION 3.1 PAGE 19

 D STUDY P x T x J DESIGN

 SUMMARY OF D STUDY RESULTS FOR SET OF CONTROL CARDS NO. 001

 ---------------------------------------------------------------------------------------------------------------------------------

 V A R I A N C E S

 SAMPLE SIZES --------------------------------------------------------

 D STUDY ------------------------------------- EXPECTED LOWER UPPER

 DESIGN INDEX= $P T J UNIVERSE OBSERVED CASE CASE GEN.

 NO UNIV.= INF. INF. INF. SCORE SCORE DELTA DELTA MEAN COEF. PHI

 ---------------------------------------------------------------------------------------------------------------------------------

 001-001 12 4 1 .30714 .47839 .17125 .20431 .07292 .64202 .60053

 001-002 12 4 3 .30714 .44117 .13403 .16489 .06762 .69619 .65068

 001-003 12 4 5 .30714 .43372 .12658 .15700 .06656 .70814 .66174

 001-004 12 4 7 .30714 .43053 .12339 .15362 .06611 .71339 .66659

 GENOVA VERSION 3.1 PAGE 20

 CONTROL CARD INPUT LISTING

 COLUMN 11111111112222222222333333333344444444445555555555666666666677777777778

 12345678901234567890123456789012345678901234567890123456789012345678901234567890

 COMMENT D STUDY 2 VARYING THE NUMBER OF TASKS

 COMMENT

 DSTUDY P x T x J DESIGN

 DEFFECT $ P

 DEFFECT T 2 3 4 5 12 15 20

 DEFFECT J 7

 ENDDSTUDY

 GENOVA VERSION 3.1 PAGE 21

 D STUDY P x T x J DESIGN

 D STUDY DESIGN NUMBER 002-001

 OBJECT OF MEASUREMENT : P FACETS : T J

 G STUDY POPULATION SIZE : INFINITE G STUDY UNIVERSE SIZES : INFINITE INFINITE

 D STUDY POPULATION SIZE : INFINITE D STUDY UNIVERSE SIZES : INFINITE INFINITE

 D STUDY SAMPLE SIZE : 12 D STUDY SAMPLE SIZES : 2 7

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 VARIANCE COMPONENTS IN TERMS OF VARIANCE COMPONENTS IN TERMS OF

 G STUDY UNIVERSE (OF ADMISSIBLE OBSERVATIONS) SIZES D STUDY UNIVERSE (OF GENERALIZATION) SIZES

 ---------------------------------------------------------- -----------------------------------------------------------

 VARIANCE COMPONENTS VARIANCE COMPONENTS

 VARIANCE FINITE D STUDY FOR MEAN SCORES VARIANCE FINITE D STUDY FOR MEAN SCORES

 COMPONENTS UNIVERSE SAMPLING -------------------------- COMPONENTS UNIVERSE SAMPLING ---------------------------

 FOR SINGLE COR- FRE- STANDARD FOR SINGLE COR- FRE- STANDARD

 EFFECT OBSERVATIONS RECTIONS QUENCIES ESTIMATES ERRORS OBSERVATIONS RECTIONS QUENCIES ESTIMATES ERRORS

 ----------------------------------------------------------------------------------------------------------------------------------

 P .30714 1.0000 1 .30714 .17133 .30714 1.0000 1 .30714 .17133

 T .11904 1.0000 2 .05952 .05062 .11904 1.0000 2 .05952 .05062

 J .00329 1.0000 7 .00047 .00059 .00329 1.0000 7 .00047 .00059

 PT .46166 1.0000 2 .23083 .05782 .46166 1.0000 2 .23083 .05782

 PJ .01735 1.0000 7 .00248 .00147 .01735 1.0000 7 .00248 .00147

 TJ .00000E+00 1.0000 14 .00000E+00 .00025 .00000E+00 1.0000 14 .00000E+00 .00025

 PTJ .15396 1.0000 14 .01100 .00110 .15396 1.0000 14 .01100 .00110

 ----------------------------------------------------------------------------------------------------------------------------------

 QFM = QUADRATIC FORM

 ----------------------------------------------------------------------------------------------------------------------------------

 STANDARD

 STANDARD ERROR OF

 VARIANCE DEVIATION VARIANCE

 UNIVERSE SCORE .30714 .55420 .17133

 EXPECTED OBSERVED SCORE .55144 .74259 .17132

 LOWER CASE DELTA .24431 .49427 .05783 GENERALIZABILITY COEFFICIENT = .55697 ( 1.25718)

 UPPER CASE DELTA .30430 .55163 .07314 PHI = .50232 ( 1.00933)

 MEAN .10594 .32549

 ----------------------------------------------------------------------------------------------------------------------------------

 NOTE: SIGNAL/NOISE RATIOS ARE IN PARENTHESES

 GENOVA VERSION 3.1 PAGE 22

 D STUDY P x T x J DESIGN

 D STUDY DESIGN NUMBER 002-001

 VARIANCE - COVARIANCE MATRIX FOR ESTIMATED VARIANCE COMPONENTS (FOR MEAN SCORES) IN UNIVERSE OF GENERALIZATION (W)

 P T J PT PJ TJ PTJ

 P .0293539

 T .0001393 .0025623

 J .0000002 .0000000 .0000004

 PT -.0016715 -.0002786 -.0000001 .0033430

 PJ -.0000022 -.0000001 -.0000002 .0000006 .0000022

 TJ -.0000001 -.0000001 .0000000 .0000001 .0000001 .0000001

 PTJ .0000006 .0000001 .0000001 -.0000012 -.0000006 -.0000001 .0000012

 GENOVA VERSION 3.1 PAGE 23

 D STUDY P x T x J DESIGN

 D STUDY DESIGN NUMBER 002-002

 OBJECT OF MEASUREMENT : P FACETS : T J

 G STUDY POPULATION SIZE : INFINITE G STUDY UNIVERSE SIZES : INFINITE INFINITE

 D STUDY POPULATION SIZE : INFINITE D STUDY UNIVERSE SIZES : INFINITE INFINITE

 D STUDY SAMPLE SIZE : 12 D STUDY SAMPLE SIZES : 3 7

 ----------------------------------------------------------------------------------------------------------------------------------

 VARIANCE COMPONENTS IN TERMS OF VARIANCE COMPONENTS IN TERMS OF

 G STUDY UNIVERSE (OF ADMISSIBLE OBSERVATIONS) SIZES D STUDY UNIVERSE (OF GENERALIZATION) SIZES

 ---------------------------------------------------------- -----------------------------------------------------------

 VARIANCE COMPONENTS VARIANCE COMPONENTS

 VARIANCE FINITE D STUDY FOR MEAN SCORES VARIANCE FINITE D STUDY FOR MEAN SCORES

 COMPONENTS UNIVERSE SAMPLING -------------------------- COMPONENTS UNIVERSE SAMPLING ---------------------------

 FOR SINGLE COR- FRE- STANDARD FOR SINGLE COR- FRE- STANDARD

 EFFECT OBSERVATIONS RECTIONS QUENCIES ESTIMATES ERRORS OBSERVATIONS RECTIONS QUENCIES ESTIMATES ERRORS

 ----------------------------------------------------------------------------------------------------------------------------------

 P .30714 1.0000 1 .30714 .17133 .30714 1.0000 1 .30714 .17133

 T .11904 1.0000 3 .03968 .03375 .11904 1.0000 3 .03968 .03375

 J .00329 1.0000 7 .00047 .00059 .00329 1.0000 7 .00047 .00059

 PT .46166 1.0000 3 .15389 .03855 .46166 1.0000 3 .15389 .03855

 PJ .01735 1.0000 7 .00248 .00147 .01735 1.0000 7 .00248 .00147

 TJ .00000E+00 1.0000 21 .00000E+00 .00016 .00000E+00 1.0000 21 .00000E+00 .00016

 PTJ .15396 1.0000 21 .00733 .00073 .15396 1.0000 21 .00733 .00073

 ----------------------------------------------------------------------------------------------------------------------------------

 QFM = QUADRATIC FORM

 ----------------------------------------------------------------------------------------------------------------------------------

 STANDARD

 STANDARD ERROR OF

 VARIANCE DEVIATION VARIANCE

 UNIVERSE SCORE .30714 .55420 .17133

 EXPECTED OBSERVED SCORE .47083 .68617 .16914

 LOWER CASE DELTA .16370 .40460 .03857 GENERALIZABILITY COEFFICIENT = .65232 ( 1.87625)

 UPPER CASE DELTA .20385 .45149 .04877 PHI = .60107 ( 1.50670)

 MEAN .07939 .28176

 ----------------------------------------------------------------------------------------------------------------------------------

 NOTE: SIGNAL/NOISE RATIOS ARE IN PARENTHESES

 GENOVA VERSION 3.1 PAGE 24

 D STUDY P x T x J DESIGN

 D STUDY DESIGN NUMBER 002-002

 VARIANCE - COVARIANCE MATRIX FOR ESTIMATED VARIANCE COMPONENTS (FOR MEAN SCORES) IN UNIVERSE OF GENERALIZATION (W)

 P T J PT PJ TJ PTJ

 P .0293539

 T .0000929 .0011388

 J .0000002 .0000000 .0000004

 PT -.0011143 -.0001238 .0000000 .0014858

 PJ -.0000022 .0000000 -.0000002 .0000004 .0000022

 TJ .0000000 .0000000 .0000000 .0000000 .0000000 .0000000

 PTJ .0000004 .0000000 .0000000 -.0000005 -.0000004 .0000000 .0000005

 GENOVA VERSION 3.1 PAGE 25

 D STUDY P x T x J DESIGN

 D STUDY DESIGN NUMBER 002-003

 OBJECT OF MEASUREMENT : P FACETS : T J

 G STUDY POPULATION SIZE : INFINITE G STUDY UNIVERSE SIZES : INFINITE INFINITE

 D STUDY POPULATION SIZE : INFINITE D STUDY UNIVERSE SIZES : INFINITE INFINITE

 D STUDY SAMPLE SIZE : 12 D STUDY SAMPLE SIZES : 4 7

 ----------------------------------------------------------------------------------------------------------------------------------

 VARIANCE COMPONENTS IN TERMS OF VARIANCE COMPONENTS IN TERMS OF

 G STUDY UNIVERSE (OF ADMISSIBLE OBSERVATIONS) SIZES D STUDY UNIVERSE (OF GENERALIZATION) SIZES

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 VARIANCE COMPONENTS VARIANCE COMPONENTS

 VARIANCE FINITE D STUDY FOR MEAN SCORES VARIANCE FINITE D STUDY FOR MEAN SCORES

 COMPONENTS UNIVERSE SAMPLING -------------------------- COMPONENTS UNIVERSE SAMPLING ---------------------------

 FOR SINGLE COR- FRE- STANDARD FOR SINGLE COR- FRE- STANDARD

 EFFECT OBSERVATIONS RECTIONS QUENCIES ESTIMATES ERRORS OBSERVATIONS RECTIONS QUENCIES ESTIMATES ERRORS

 ----------------------------------------------------------------------------------------------------------------------------------

 P .30714 1.0000 1 .30714 .17133 .30714 1.0000 1 .30714 .17133

 T .11904 1.0000 4 .02976 .02531 .11904 1.0000 4 .02976 .02531

 J .00329 1.0000 7 .00047 .00059 .00329 1.0000 7 .00047 .00059

 PT .46166 1.0000 4 .11542 .02891 .46166 1.0000 4 .11542 .02891

 PJ .01735 1.0000 7 .00248 .00147 .01735 1.0000 7 .00248 .00147

 TJ .00000E+00 1.0000 28 .00000E+00 .00012 .00000E+00 1.0000 28 .00000E+00 .00012

 PTJ .15396 1.0000 28 .00550 .00055 .15396 1.0000 28 .00550 .00055

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 QFM = QUADRATIC FORM

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 STANDARD

 STANDARD ERROR OF

 VARIANCE DEVIATION VARIANCE

 UNIVERSE SCORE .30714 .55420 .17133

 EXPECTED OBSERVED SCORE .43053 .65615 .16887

 LOWER CASE DELTA .12339 .35127 .02894 GENERALIZABILITY COEFFICIENT = .71339 ( 2.48910)

 UPPER CASE DELTA .15362 .39195 .03659 PHI = .66659 ( 1.99929)

 MEAN .06611 .25711

 ----------------------------------------------------------------------------------------------------------------------------------

 NOTE: SIGNAL/NOISE RATIOS ARE IN PARENTHESES

 GENOVA VERSION 3.1 PAGE 26

 D STUDY P x T x J DESIGN

 D STUDY DESIGN NUMBER 002-003

 VARIANCE - COVARIANCE MATRIX FOR ESTIMATED VARIANCE COMPONENTS (FOR MEAN SCORES) IN UNIVERSE OF GENERALIZATION (W)

 P T J PT PJ TJ PTJ

 P .0293539

 T .0000696 .0006406

 J .0000002 .0000000 .0000004

 PT -.0008357 -.0000696 .0000000 .0008357

 PJ -.0000022 .0000000 -.0000002 .0000003 .0000022

 TJ .0000000 .0000000 .0000000 .0000000 .0000000 .0000000

 PTJ .0000003 .0000000 .0000000 -.0000003 -.0000003 .0000000 .0000003

 GENOVA VERSION 3.1 PAGE 27

 D STUDY P x T x J DESIGN

 D STUDY DESIGN NUMBER 002-004

 OBJECT OF MEASUREMENT : P FACETS : T J

 G STUDY POPULATION SIZE : INFINITE G STUDY UNIVERSE SIZES : INFINITE INFINITE

 D STUDY POPULATION SIZE : INFINITE D STUDY UNIVERSE SIZES : INFINITE INFINITE

 D STUDY SAMPLE SIZE : 12 D STUDY SAMPLE SIZES : 5 7

 ----------------------------------------------------------------------------------------------------------------------------------

 VARIANCE COMPONENTS IN TERMS OF VARIANCE COMPONENTS IN TERMS OF

 G STUDY UNIVERSE (OF ADMISSIBLE OBSERVATIONS) SIZES D STUDY UNIVERSE (OF GENERALIZATION) SIZES

 ---------------------------------------------------------- -----------------------------------------------------------

 VARIANCE COMPONENTS VARIANCE COMPONENTS

 VARIANCE FINITE D STUDY FOR MEAN SCORES VARIANCE FINITE D STUDY FOR MEAN SCORES

 COMPONENTS UNIVERSE SAMPLING -------------------------- COMPONENTS UNIVERSE SAMPLING ---------------------------

 FOR SINGLE COR- FRE- STANDARD FOR SINGLE COR- FRE- STANDARD

 EFFECT OBSERVATIONS RECTIONS QUENCIES ESTIMATES ERRORS OBSERVATIONS RECTIONS QUENCIES ESTIMATES ERRORS

 ----------------------------------------------------------------------------------------------------------------------------------

 P .30714 1.0000 1 .30714 .17133 .30714 1.0000 1 .30714 .17133

 T .11904 1.0000 5 .02381 .02025 .11904 1.0000 5 .02381 .02025

 J .00329 1.0000 7 .00047 .00059 .00329 1.0000 7 .00047 .00059

 PT .46166 1.0000 5 .09233 .02313 .46166 1.0000 5 .09233 .02313

 PJ .01735 1.0000 7 .00248 .00147 .01735 1.0000 7 .00248 .00147

 TJ .00000E+00 1.0000 35 .00000E+00 .00010 .00000E+00 1.0000 35 .00000E+00 .00010

 PTJ .15396 1.0000 35 .00440 .00044 .15396 1.0000 35 .00440 .00044

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 QFM = QUADRATIC FORM

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 STANDARD

 STANDARD ERROR OF

 VARIANCE DEVIATION VARIANCE

 UNIVERSE SCORE .30714 .55420 .17133

 EXPECTED OBSERVED SCORE .40635 .63745 .16897

 LOWER CASE DELTA .09921 .31498 .02317 GENERALIZABILITY COEFFICIENT = .75585 ( 3.09583)

 UPPER CASE DELTA .12349 .35141 .02929 PHI = .71324 ( 2.48718)

 MEAN .05814 .24112

 ----------------------------------------------------------------------------------------------------------------------------------

 NOTE: SIGNAL/NOISE RATIOS ARE IN PARENTHESES

 GENOVA VERSION 3.1 PAGE 28

 D STUDY P x T x J DESIGN

 D STUDY DESIGN NUMBER 002-004

 VARIANCE - COVARIANCE MATRIX FOR ESTIMATED VARIANCE COMPONENTS (FOR MEAN SCORES) IN UNIVERSE OF GENERALIZATION (W)

 P T J PT PJ TJ PTJ

 P .0293539

 T .0000557 .0004100

 J .0000002 .0000000 .0000004

 PT -.0006686 -.0000446 .0000000 .0005349

 PJ -.0000022 .0000000 -.0000002 .0000002 .0000022

 TJ .0000000 .0000000 .0000000 .0000000 .0000000 .0000000

 PTJ .0000002 .0000000 .0000000 -.0000002 -.0000002 .0000000 .0000002

 GENOVA VERSION 3.1 PAGE 29

 D STUDY P x T x J DESIGN

 D STUDY DESIGN NUMBER 002-005

 OBJECT OF MEASUREMENT : P FACETS : T J

 G STUDY POPULATION SIZE : INFINITE G STUDY UNIVERSE SIZES : INFINITE INFINITE

 D STUDY POPULATION SIZE : INFINITE D STUDY UNIVERSE SIZES : INFINITE INFINITE

 D STUDY SAMPLE SIZE : 12 D STUDY SAMPLE SIZES : 12 7

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 VARIANCE COMPONENTS IN TERMS OF VARIANCE COMPONENTS IN TERMS OF

 G STUDY UNIVERSE (OF ADMISSIBLE OBSERVATIONS) SIZES D STUDY UNIVERSE (OF GENERALIZATION) SIZES

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 VARIANCE COMPONENTS VARIANCE COMPONENTS

 VARIANCE FINITE D STUDY FOR MEAN SCORES VARIANCE FINITE D STUDY FOR MEAN SCORES

 COMPONENTS UNIVERSE SAMPLING -------------------------- COMPONENTS UNIVERSE SAMPLING ---------------------------

 FOR SINGLE COR- FRE- STANDARD FOR SINGLE COR- FRE- STANDARD

 EFFECT OBSERVATIONS RECTIONS QUENCIES ESTIMATES ERRORS OBSERVATIONS RECTIONS QUENCIES ESTIMATES ERRORS

 ----------------------------------------------------------------------------------------------------------------------------------

 P .30714 1.0000 1 .30714 .17133 .30714 1.0000 1 .30714 .17133

 T .11904 1.0000 12 .00992 .00844 .11904 1.0000 12 .00992 .00844

 J .00329 1.0000 7 .00047 .00059 .00329 1.0000 7 .00047 .00059

 PT .46166 1.0000 12 .03847 .00964 .46166 1.0000 12 .03847 .00964

 PJ .01735 1.0000 7 .00248 .00147 .01735 1.0000 7 .00248 .00147

 TJ .00000E+00 1.0000 84 .00000E+00 .00004 .00000E+00 1.0000 84 .00000E+00 .00004

 PTJ .15396 1.0000 84 .00183 .00018 .15396 1.0000 84 .00183 .00018

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 QFM = QUADRATIC FORM

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 STANDARD

 STANDARD ERROR OF

 VARIANCE DEVIATION VARIANCE

 UNIVERSE SCORE .30714 .55420 .17133

 EXPECTED OBSERVED SCORE .34992 .59154 .16996

 LOWER CASE DELTA .04278 .20684 .00975 GENERALIZABILITY COEFFICIENT = .87773 ( 7.17891)

 UPPER CASE DELTA .05317 .23059 .01228 PHI = .85242 ( 5.77613)

 MEAN .03955 .19887

 ----------------------------------------------------------------------------------------------------------------------------------

 NOTE: SIGNAL/NOISE RATIOS ARE IN PARENTHESES

 GENOVA VERSION 3.1 PAGE 30

 D STUDY P x T x J DESIGN

 D STUDY DESIGN NUMBER 002-005

 VARIANCE - COVARIANCE MATRIX FOR ESTIMATED VARIANCE COMPONENTS (FOR MEAN SCORES) IN UNIVERSE OF GENERALIZATION (W)

 P T J PT PJ TJ PTJ

 P .0293539

 T .0000232 .0000712

 J .0000002 .0000000 .0000004

 PT -.0002786 -.0000077 .0000000 .0000929

 PJ -.0000022 .0000000 -.0000002 .0000001 .0000022

 TJ .0000000 .0000000 .0000000 .0000000 .0000000 .0000000

 PTJ .0000001 .0000000 .0000000 .0000000 -.0000001 .0000000 .0000000

 GENOVA VERSION 3.1 PAGE 31

 D STUDY P x T x J DESIGN

 D STUDY DESIGN NUMBER 002-006

 OBJECT OF MEASUREMENT : P FACETS : T J

 G STUDY POPULATION SIZE : INFINITE G STUDY UNIVERSE SIZES : INFINITE INFINITE

 D STUDY POPULATION SIZE : INFINITE D STUDY UNIVERSE SIZES : INFINITE INFINITE

 D STUDY SAMPLE SIZE : 12 D STUDY SAMPLE SIZES : 15 7

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 VARIANCE COMPONENTS IN TERMS OF VARIANCE COMPONENTS IN TERMS OF

 G STUDY UNIVERSE (OF ADMISSIBLE OBSERVATIONS) SIZES D STUDY UNIVERSE (OF GENERALIZATION) SIZES

 ---------------------------------------------------------- -----------------------------------------------------------

 VARIANCE COMPONENTS VARIANCE COMPONENTS

 VARIANCE FINITE D STUDY FOR MEAN SCORES VARIANCE FINITE D STUDY FOR MEAN SCORES

 COMPONENTS UNIVERSE SAMPLING -------------------------- COMPONENTS UNIVERSE SAMPLING ---------------------------

 FOR SINGLE COR- FRE- STANDARD FOR SINGLE COR- FRE- STANDARD

 EFFECT OBSERVATIONS RECTIONS QUENCIES ESTIMATES ERRORS OBSERVATIONS RECTIONS QUENCIES ESTIMATES ERRORS

 ----------------------------------------------------------------------------------------------------------------------------------

 P .30714 1.0000 1 .30714 .17133 .30714 1.0000 1 .30714 .17133

 T .11904 1.0000 15 .00794 .00675 .11904 1.0000 15 .00794 .00675

 J .00329 1.0000 7 .00047 .00059 .00329 1.0000 7 .00047 .00059

 PT .46166 1.0000 15 .03078 .00771 .46166 1.0000 15 .03078 .00771

 PJ .01735 1.0000 7 .00248 .00147 .01735 1.0000 7 .00248 .00147

 TJ .00000E+00 1.0000 105 .00000E+00 .00003 .00000E+00 1.0000 105 .00000E+00 .00003

 PTJ .15396 1.0000 105 .00147 .00015 .15396 1.0000 105 .00147 .00015

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 QFM = QUADRATIC FORM

 ----------------------------------------------------------------------------------------------------------------------------------

 STANDARD

 STANDARD ERROR OF

 VARIANCE DEVIATION VARIANCE

 UNIVERSE SCORE .30714 .55420 .17133

 EXPECTED OBSERVED SCORE .34186 .58469 .17019

 LOWER CASE DELTA .03472 .18634 .00785 GENERALIZABILITY COEFFICIENT = .89843 ( 8.84554)

 UPPER CASE DELTA .04313 .20767 .00986 PHI = .87687 ( 7.12142)

 MEAN .03689 .19208

 ----------------------------------------------------------------------------------------------------------------------------------

 NOTE: SIGNAL/NOISE RATIOS ARE IN PARENTHESES

 GENOVA VERSION 3.1 PAGE 32

 D STUDY P x T x J DESIGN

 D STUDY DESIGN NUMBER 002-006

 VARIANCE - COVARIANCE MATRIX FOR ESTIMATED VARIANCE COMPONENTS (FOR MEAN SCORES) IN UNIVERSE OF GENERALIZATION (W)

 P T J PT PJ TJ PTJ

 P .0293539

 T .0000186 .0000456

 J .0000002 .0000000 .0000004

 PT -.0002229 -.0000050 .0000000 .0000594

 PJ -.0000022 .0000000 -.0000002 .0000001 .0000022

 TJ .0000000 .0000000 .0000000 .0000000 .0000000 .0000000

 PTJ .0000001 .0000000 .0000000 .0000000 -.0000001 .0000000 .0000000

 GENOVA VERSION 3.1 PAGE 33

 D STUDY P x T x J DESIGN

 D STUDY DESIGN NUMBER 002-007

 OBJECT OF MEASUREMENT : P FACETS : T J

 G STUDY POPULATION SIZE : INFINITE G STUDY UNIVERSE SIZES : INFINITE INFINITE

 D STUDY POPULATION SIZE : INFINITE D STUDY UNIVERSE SIZES : INFINITE INFINITE

 D STUDY SAMPLE SIZE : 12 D STUDY SAMPLE SIZES : 20 7

 ----------------------------------------------------------------------------------------------------------------------------------

 VARIANCE COMPONENTS IN TERMS OF VARIANCE COMPONENTS IN TERMS OF

 G STUDY UNIVERSE (OF ADMISSIBLE OBSERVATIONS) SIZES D STUDY UNIVERSE (OF GENERALIZATION) SIZES

 ---------------------------------------------------------- -----------------------------------------------------------

 VARIANCE COMPONENTS VARIANCE COMPONENTS

 VARIANCE FINITE D STUDY FOR MEAN SCORES VARIANCE FINITE D STUDY FOR MEAN SCORES

 COMPONENTS UNIVERSE SAMPLING -------------------------- COMPONENTS UNIVERSE SAMPLING ---------------------------

 FOR SINGLE COR- FRE- STANDARD FOR SINGLE COR- FRE- STANDARD

 EFFECT OBSERVATIONS RECTIONS QUENCIES ESTIMATES ERRORS OBSERVATIONS RECTIONS QUENCIES ESTIMATES ERRORS

 ----------------------------------------------------------------------------------------------------------------------------------

 P .30714 1.0000 1 .30714 .17133 .30714 1.0000 1 .30714 .17133

 T .11904 1.0000 20 .00595 .00506 .11904 1.0000 20 .00595 .00506

 J .00329 1.0000 7 .00047 .00059 .00329 1.0000 7 .00047 .00059

 PT .46166 1.0000 20 .02308 .00578 .46166 1.0000 20 .02308 .00578

 PJ .01735 1.0000 7 .00248 .00147 .01735 1.0000 7 .00248 .00147

 TJ .00000E+00 1.0000 140 .00000E+00 .00002 .00000E+00 1.0000 140 .00000E+00 .00002

 PTJ .15396 1.0000 140 .00110 .00011 .15396 1.0000 140 .00110 .00011

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 QFM = QUADRATIC FORM

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 STANDARD

 STANDARD ERROR OF

 VARIANCE DEVIATION VARIANCE

 UNIVERSE SCORE .30714 .55420 .17133

 EXPECTED OBSERVED SCORE .33380 .57775 .17044

 LOWER CASE DELTA .02666 .16328 .00597 GENERALIZABILITY COEFFICIENT = .92013 (11.51995)

 UPPER CASE DELTA .03308 .18189 .00746 PHI = .90276 ( 9.28365)

 MEAN .03424 .18504

 ----------------------------------------------------------------------------------------------------------------------------------

 NOTE: SIGNAL/NOISE RATIOS ARE IN PARENTHESES

 GENOVA VERSION 3.1 PAGE 34

 D STUDY P x T x J DESIGN

 D STUDY DESIGN NUMBER 002-007

 VARIANCE - COVARIANCE MATRIX FOR ESTIMATED VARIANCE COMPONENTS (FOR MEAN SCORES) IN UNIVERSE OF GENERALIZATION (W)

 P T J PT PJ TJ PTJ

 P .0293539

 T .0000139 .0000256

 J .0000002 .0000000 .0000004

 PT -.0001671 -.0000028 .0000000 .0000334

 PJ -.0000022 .0000000 -.0000002 .0000001 .0000022

 TJ .0000000 .0000000 .0000000 .0000000 .0000000 .0000000

 PTJ .0000001 .0000000 .0000000 .0000000 -.0000001 .0000000 .0000000

 GENOVA VERSION 3.1 PAGE 35

 D STUDY P x T x J DESIGN

 SUMMARY OF D STUDY RESULTS FOR SET OF CONTROL CARDS NO. 002

 ---------------------------------------------------------------------------------------------------------------------------------

 V A R I A N C E S

 SAMPLE SIZES --------------------------------------------------------

 D STUDY ------------------------------------- EXPECTED LOWER UPPER

 DESIGN INDEX= $P T J UNIVERSE OBSERVED CASE CASE GEN.

 NO UNIV.= INF. INF. INF. SCORE SCORE DELTA DELTA MEAN COEF. PHI

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 002-001 12 2 7 .30714 .55144 .24431 .30430 .10594 .55697 .50232

 002-002 12 3 7 .30714 .47083 .16370 .20385 .07939 .65232 .60107

 002-003 12 4 7 .30714 .43053 .12339 .15362 .06611 .71339 .66659

 002-004 12 5 7 .30714 .40635 .09921 .12349 .05814 .75585 .71324

 002-005 12 12 7 .30714 .34992 .04278 .05317 .03955 .87773 .85242

 002-006 12 15 7 .30714 .34186 .03472 .04313 .03689 .89843 .87687

 002-007 12 20 7 .30714 .33380 .02666 .03308 .03424 .92013 .90276

 GENOVA VERSION 3.1 PAGE 36

 CONTROL CARD INPUT LISTING

 COLUMN 11111111112222222222333333333344444444445555555555666666666677777777778

 12345678901234567890123456789012345678901234567890123456789012345678901234567890

 COMMENT D STUDY 3 VARYING THE NUMBER OF RATERS

 COMMENT

 DSTUDY P x T x J DESIGN; T FIXED

 DEFFECT $ P

 DEFFECT T 4 / 4

 DEFFECT J 1 3 5 7

 ENDDSTUDY

 GENOVA VERSION 3.1 PAGE 37

 D STUDY P x T x J DESIGN; T FIXED

 D STUDY DESIGN NUMBER 003-001

 OBJECT OF MEASUREMENT : P FACETS : T J

 G STUDY POPULATION SIZE : INFINITE G STUDY UNIVERSE SIZES : INFINITE INFINITE

 D STUDY POPULATION SIZE : INFINITE D STUDY UNIVERSE SIZES : 4 INFINITE

 D STUDY SAMPLE SIZE : 12 D STUDY SAMPLE SIZES : 4 1

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 VARIANCE COMPONENTS IN TERMS OF VARIANCE COMPONENTS IN TERMS OF

 G STUDY UNIVERSE (OF ADMISSIBLE OBSERVATIONS) SIZES D STUDY UNIVERSE (OF GENERALIZATION) SIZES

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 VARIANCE COMPONENTS VARIANCE COMPONENTS

 VARIANCE FINITE D STUDY FOR MEAN SCORES VARIANCE FINITE D STUDY FOR MEAN SCORES

 COMPONENTS UNIVERSE SAMPLING -------------------------- COMPONENTS UNIVERSE SAMPLING ---------------------------

 FOR SINGLE COR- FRE- STANDARD FOR SINGLE COR- FRE- STANDARD

 EFFECT OBSERVATIONS RECTIONS QUENCIES ESTIMATES ERRORS OBSERVATIONS RECTIONS QUENCIES ESTIMATES ERRORS

 ----------------------------------------------------------------------------------------------------------------------------------

 P .30714 1.0000 1 .30714 .17133 .42255 1.0000 1 .42255 .16887

 T .11904 1.0000 4 .02976 .02531 .11904QFM0000E+00 4 ------- -------

 J .00329 1.0000 1 .00329 .00414 .00329 1.0000 1 .00329 .00405

 PT .46166 1.0000 4 .11542 .02891 .46166 .0000E+00 4 ------- -------

 PJ .01735 1.0000 1 .01735 .01032 .05584 1.0000 1 .05584 .00958

 TJ .00000E+00 1.0000 4 .00000E+00 .00086 .00000E+00 .0000E+00 4 ------- -------

 PTJ .15396 1.0000 4 .03849 .00385 .15396 .0000E+00 4 ------- -------

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 QFM = QUADRATIC FORM

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 STANDARD

 STANDARD ERROR OF

 VARIANCE DEVIATION VARIANCE

 UNIVERSE SCORE .42255 .65004 .16887

 EXPECTED OBSERVED SCORE .47839 .69166 .16907

 LOWER CASE DELTA .05584 .23630 .00958 GENERALIZABILITY COEFFICIENT = .88328 ( 7.56734)

 UPPER CASE DELTA .05913 .24317 .00964 PHI = .87724 ( 7.14593)

 MEAN .04316 .20775

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 NOTE: SIGNAL/NOISE RATIOS ARE IN PARENTHESES

 GENOVA VERSION 3.1 PAGE 38

 D STUDY P x T x J DESIGN; T FIXED

 D STUDY DESIGN NUMBER 003-001

 VARIANCE - COVARIANCE MATRIX FOR ESTIMATED VARIANCE COMPONENTS (FOR MEAN SCORES) IN UNIVERSE OF GENERALIZATION (W)

 P J PJ

 P .0285181

 J .0000011 .0000164

 PJ -.0000131 -.0000076 .0000917

 GENOVA VERSION 3.1 PAGE 39

 D STUDY P x T x J DESIGN; T FIXED

 D STUDY DESIGN NUMBER 003-002

 OBJECT OF MEASUREMENT : P FACETS : T J

 G STUDY POPULATION SIZE : INFINITE G STUDY UNIVERSE SIZES : INFINITE INFINITE

 D STUDY POPULATION SIZE : INFINITE D STUDY UNIVERSE SIZES : 4 INFINITE

 D STUDY SAMPLE SIZE : 12 D STUDY SAMPLE SIZES : 4 3

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 VARIANCE COMPONENTS IN TERMS OF VARIANCE COMPONENTS IN TERMS OF

 G STUDY UNIVERSE (OF ADMISSIBLE OBSERVATIONS) SIZES D STUDY UNIVERSE (OF GENERALIZATION) SIZES

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 VARIANCE COMPONENTS VARIANCE COMPONENTS

 VARIANCE FINITE D STUDY FOR MEAN SCORES VARIANCE FINITE D STUDY FOR MEAN SCORES

 COMPONENTS UNIVERSE SAMPLING -------------------------- COMPONENTS UNIVERSE SAMPLING ---------------------------

 FOR SINGLE COR- FRE- STANDARD FOR SINGLE COR- FRE- STANDARD

 EFFECT OBSERVATIONS RECTIONS QUENCIES ESTIMATES ERRORS OBSERVATIONS RECTIONS QUENCIES ESTIMATES ERRORS

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 P .30714 1.0000 1 .30714 .17133 .42255 1.0000 1 .42255 .16887

 T .11904 1.0000 4 .02976 .02531 .11904QFM0000E+00 4 ------- -------

 J .00329 1.0000 3 .00110 .00138 .00329 1.0000 3 .00110 .00135

 PT .46166 1.0000 4 .11542 .02891 .46166 .0000E+00 4 ------- -------

 PJ .01735 1.0000 3 .00578 .00344 .05584 1.0000 3 .01861 .00319

 TJ .00000E+00 1.0000 12 .00000E+00 .00029 .00000E+00 .0000E+00 12 ------- -------

 PTJ .15396 1.0000 12 .01283 .00128 .15396 .0000E+00 12 ------- -------

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 QFM = QUADRATIC FORM

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 STANDARD

 STANDARD ERROR OF

 VARIANCE DEVIATION VARIANCE

 UNIVERSE SCORE .42255 .65004 .16887

 EXPECTED OBSERVED SCORE .44117 .66420 .16888

 LOWER CASE DELTA .01861 .13643 .00319 GENERALIZABILITY COEFFICIENT = .95781 (22.70202)

 UPPER CASE DELTA .01971 .14039 .00321 PHI = .95543 (21.43778)

 MEAN .03786 .19458

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 NOTE: SIGNAL/NOISE RATIOS ARE IN PARENTHESES

 GENOVA VERSION 3.1 PAGE 40

 D STUDY P x T x J DESIGN; T FIXED

 D STUDY DESIGN NUMBER 003-002

 VARIANCE - COVARIANCE MATRIX FOR ESTIMATED VARIANCE COMPONENTS (FOR MEAN SCORES) IN UNIVERSE OF GENERALIZATION (W)

 P J PJ

 P .0285181

 J .0000004 .0000018

 PJ -.0000044 -.0000008 .0000102

 GENOVA VERSION 3.1 PAGE 41

 D STUDY P x T x J DESIGN; T FIXED

 D STUDY DESIGN NUMBER 003-003

 OBJECT OF MEASUREMENT : P FACETS : T J

 G STUDY POPULATION SIZE : INFINITE G STUDY UNIVERSE SIZES : INFINITE INFINITE

 D STUDY POPULATION SIZE : INFINITE D STUDY UNIVERSE SIZES : 4 INFINITE

 D STUDY SAMPLE SIZE : 12 D STUDY SAMPLE SIZES : 4 5

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 VARIANCE COMPONENTS IN TERMS OF VARIANCE COMPONENTS IN TERMS OF

 G STUDY UNIVERSE (OF ADMISSIBLE OBSERVATIONS) SIZES D STUDY UNIVERSE (OF GENERALIZATION) SIZES

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 VARIANCE COMPONENTS VARIANCE COMPONENTS

 VARIANCE FINITE D STUDY FOR MEAN SCORES VARIANCE FINITE D STUDY FOR MEAN SCORES

 COMPONENTS UNIVERSE SAMPLING -------------------------- COMPONENTS UNIVERSE SAMPLING ---------------------------

 FOR SINGLE COR- FRE- STANDARD FOR SINGLE COR- FRE- STANDARD

 EFFECT OBSERVATIONS RECTIONS QUENCIES ESTIMATES ERRORS OBSERVATIONS RECTIONS QUENCIES ESTIMATES ERRORS

 ----------------------------------------------------------------------------------------------------------------------------------

 P .30714 1.0000 1 .30714 .17133 .42255 1.0000 1 .42255 .16887

 T .11904 1.0000 4 .02976 .02531 .11904QFM0000E+00 4 ------- -------

 J .00329 1.0000 5 .00066 .00083 .00329 1.0000 5 .00066 .00081

 PT .46166 1.0000 4 .11542 .02891 .46166 .0000E+00 4 ------- -------

 PJ .01735 1.0000 5 .00347 .00206 .05584 1.0000 5 .01117 .00192

 TJ .00000E+00 1.0000 20 .00000E+00 .00017 .00000E+00 .0000E+00 20 ------- -------

 PTJ .15396 1.0000 20 .00770 .00077 .15396 .0000E+00 20 ------- -------

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 QFM = QUADRATIC FORM

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 STANDARD

 STANDARD ERROR OF

 VARIANCE DEVIATION VARIANCE

 UNIVERSE SCORE .42255 .65004 .16887

 EXPECTED OBSERVED SCORE .43372 .65857 .16887

 LOWER CASE DELTA .01117 .10568 .00192 GENERALIZABILITY COEFFICIENT = .97425 (37.83671)

 UPPER CASE DELTA .01183 .10875 .00193 PHI = .97277 (35.72963)

 MEAN .03680 .19184

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 NOTE: SIGNAL/NOISE RATIOS ARE IN PARENTHESES

 GENOVA VERSION 3.1 PAGE 42

 D STUDY P x T x J DESIGN; T FIXED

 D STUDY DESIGN NUMBER 003-003

 VARIANCE - COVARIANCE MATRIX FOR ESTIMATED VARIANCE COMPONENTS (FOR MEAN SCORES) IN UNIVERSE OF GENERALIZATION (W)

 P J PJ

 P .0285181

 J .0000002 .0000007

 PJ -.0000026 -.0000003 .0000037

 GENOVA VERSION 3.1 PAGE 43

 D STUDY P x T x J DESIGN; T FIXED

 D STUDY DESIGN NUMBER 003-004

 OBJECT OF MEASUREMENT : P FACETS : T J

 G STUDY POPULATION SIZE : INFINITE G STUDY UNIVERSE SIZES : INFINITE INFINITE

 D STUDY POPULATION SIZE : INFINITE D STUDY UNIVERSE SIZES : 4 INFINITE

 D STUDY SAMPLE SIZE : 12 D STUDY SAMPLE SIZES : 4 7

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 VARIANCE COMPONENTS IN TERMS OF VARIANCE COMPONENTS IN TERMS OF

 G STUDY UNIVERSE (OF ADMISSIBLE OBSERVATIONS) SIZES D STUDY UNIVERSE (OF GENERALIZATION) SIZES

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 VARIANCE COMPONENTS VARIANCE COMPONENTS

 VARIANCE FINITE D STUDY FOR MEAN SCORES VARIANCE FINITE D STUDY FOR MEAN SCORES

 COMPONENTS UNIVERSE SAMPLING -------------------------- COMPONENTS UNIVERSE SAMPLING ---------------------------

 FOR SINGLE COR- FRE- STANDARD FOR SINGLE COR- FRE- STANDARD

 EFFECT OBSERVATIONS RECTIONS QUENCIES ESTIMATES ERRORS OBSERVATIONS RECTIONS QUENCIES ESTIMATES ERRORS

 ----------------------------------------------------------------------------------------------------------------------------------

 P .30714 1.0000 1 .30714 .17133 .42255 1.0000 1 .42255 .16887

 T .11904 1.0000 4 .02976 .02531 .11904QFM0000E+00 4 ------- -------

 J .00329 1.0000 7 .00047 .00059 .00329 1.0000 7 .00047 .00058

 PT .46166 1.0000 4 .11542 .02891 .46166 .0000E+00 4 ------- -------

 PJ .01735 1.0000 7 .00248 .00147 .05584 1.0000 7 .00798 .00137

 TJ .00000E+00 1.0000 28 .00000E+00 .00012 .00000E+00 .0000E+00 28 ------- -------

 PTJ .15396 1.0000 28 .00550 .00055 .15396 .0000E+00 28 ------- -------

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 QFM = QUADRATIC FORM

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 STANDARD

 STANDARD ERROR OF

 VARIANCE DEVIATION VARIANCE

 UNIVERSE SCORE .42255 .65004 .16887

 EXPECTED OBSERVED SCORE .43053 .65615 .16887

 LOWER CASE DELTA .00798 .08931 .00137 GENERALIZABILITY COEFFICIENT = .98147 (52.97139)

 UPPER CASE DELTA .00845 .09191 .00138 PHI = .98040 (50.02149)

 MEAN .03635 .19065

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 NOTE: SIGNAL/NOISE RATIOS ARE IN PARENTHESES

 GENOVA VERSION 3.1 PAGE 44

 D STUDY P x T x J DESIGN; T FIXED

 D STUDY DESIGN NUMBER 003-004

 VARIANCE - COVARIANCE MATRIX FOR ESTIMATED VARIANCE COMPONENTS (FOR MEAN SCORES) IN UNIVERSE OF GENERALIZATION (W)

 P J PJ

 P .0285181

 J .0000002 .0000003

 PJ -.0000019 -.0000002 .0000019

 GENOVA VERSION 3.1 PAGE 45

 D STUDY P x T x J DESIGN; T FIXED

 SUMMARY OF D STUDY RESULTS FOR SET OF CONTROL CARDS NO. 003

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 V A R I A N C E S

 SAMPLE SIZES --------------------------------------------------------

 D STUDY ------------------------------------- EXPECTED LOWER UPPER

 DESIGN INDEX= $P T J UNIVERSE OBSERVED CASE CASE GEN.

 NO UNIV.= INF. 4 INF. SCORE SCORE DELTA DELTA MEAN COEF. PHI

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 003-001 12 4 1 .42255 .47839 .05584 .05913 .04316 .88328 .87724

 003-002 12 4 3 .42255 .44117 .01861 .01971 .03786 .95781 .95543

 003-003 12 4 5 .42255 .43372 .01117 .01183 .03680 .97425 .97277

 003-004 12 4 7 .42255 .43053 .00798 .00845 .03635 .98147 .98040

 GENOVA VERSION 3.1 PAGE 46

 CONTROL CARD INPUT LISTING

 COLUMN 11111111112222222222333333333344444444445555555555666666666677777777778

 12345678901234567890123456789012345678901234567890123456789012345678901234567890

 FINISH