

YATES OUTPUT

PURPOSE

Specify which sections of the output from the YATES ANALYSIS command are printed.

DESCRIPTION

The YATES ANALYSIS command estimates the factor effects in 2-level full factorial and fractional factorial designs. It yields factor estimates for all of the coefficients (main effects and all relevant interactions). The output from the YATES ANALYSIS command is divided into 3 sections:

1. Various summary statistics are printed;
2. The estimates of the factor effects are printed in standard order;
3. The estimates of the factor effects are listed in order from most statistically significant to least statistically significant.

As of the 92/7 version, the second section is no longer printed. This result occurs even if the analyst specifically requests that it should be printed with the YATES OUTPUT command.

SYNTAX

YATES OUTPUT <1/2/3/12/13/23/123>

where any of the above choices containing "1" will print section 1, any containing "2" will print section 2, and any containing "3" will print section 3.

EXAMPLES

YATES OUTPUT 1
YATES OUTPUT 3
YATES OUTPUT 13

NOTE

Since section 2 output is no longer printed, specifying YATES OUTPUT 2 is equivalent to suppressing the output from the YATES ANALYSIS command (a few summary lines are still printed).

DEFAULT

All factor estimates are printed.

SYNONYMS

None

RELATED COMMANDS

YATES ANALYSIS	=	Carries out a Yates analysis.
YATES CUTOFF	=	Specify which factor effects are printed from the YATES ANALYSIS command.

APPLICATIONS

Design of Experiments

IMPLEMENTATION DATE

89/12

PROGRAM

```
. THIS IS AN EXAMPLE OF A YATES ANALYSIS
. OF A 2**3 FULL FACTORIAL DESIGN.
SKIP 25
READ BOXSPRIN.DAT Y X1 X2 X3
SKIP 0
YATES Y
YATES OUTPUT 1
YATES Y
YATES OUTPUT 3
YATES Y
```

The following output is generated.

```
*****
**  YATES Y  **
*****
```

```
*****
**      2**K DEX FIT      **
*****
```

(NOTE--DATA MUST BE IN STANDARD ORDER)

```
NUMBER OF OBSERVATIONS      =      8
NUMBER OF FACTORS           =      3
NO REPLICATION CASE
```

```
PSEUDO-REPLICATION STAND. DEV. = 0.70710676908E+00
PSEUDO-DEGREES OF FREEDOM      =      1
(THE PSEUDO-REP. STAND. DEV. ASSUMES ALL
3, 4, 5, ...-TERM INTERACTIONS ARE NOT REAL,
BUT MANIFESTATIONS OF RANDOM ERROR)
```

```
STANDARD DEVIATION OF A COEF.  = 0.50000000000E+00
(BASED ON PSEUDO-REP. ST. DEV.)
```

```
GRAND MEAN                    = 0.71250000000E+02
GRAND STANDARD DEVIATION      = 0.13719120979E+02
```

```
99% CONFIDENCE LIMITS (+-)    = 0.31828401566E+02
95% CONFIDENCE LIMITS (+-)    = 0.63531084061E+01
99.5% POINT OF T DISTRIBUTION = 0.63656803131E+02
97.5% POINT OF T DISTRIBUTION = 0.12706216812E+02
```

IDENTIFIER	EFFECT	T VALUE	RESSD MEAN+TERM	RESSD MEAN+TERMS
MEAN	71.25000		13.71912	13.71912
1	23.00000	46.0*	6.57647	6.57647
13	10.00000	20.0*	13.64734	3.44964
2	-5.00000	-10.0	14.53444	1.54110
3	1.50000	3.0	14.79302	1.29099
12	1.50000	3.0	14.79302	0.50000
123	0.50000	1.0	14.81553	0.00000

23 0.00000 0.0 14.81834 0.00000

NOTE--TAG, COEF, TCOEF, RESSD, & CUMULATIVE RESSD
WRITTEN TO FILES DPST1F.DAT AND DPST2F.DAT

** YATES OUTPUT 1 **

THE YATES SWITCH HAS JUST BEEN SET TO 1

** YATES Y **

** 2**K DEX FIT **

(NOTE--DATA MUST BE IN STANDARD ORDER)

NUMBER OF OBSERVATIONS = 8
NUMBER OF FACTORS = 3
NO REPLICATION CASE

PSEUDO-REPLICATION STAND. DEV. = 0.70710676908E+00
PSEUDO-DEGREES OF FREEDOM = 1
(THE PSEUDO-REP. STAND. DEV. ASSUMES ALL
3, 4, 5, ...-TERM INTERACTIONS ARE NOT REAL,
BUT MANIFESTATIONS OF RANDOM ERROR)

STANDARD DEVIATION OF A COEF. = 0.50000000000E+00
(BASED ON PSEUDO-REP. ST. DEV.)

GRAND MEAN = 0.71250000000E+02
GRAND STANDARD DEVIATION = 0.13719120979E+02

99% CONFIDENCE LIMITS (+-) = 0.31828401566E+02
95% CONFIDENCE LIMITS (+-) = 0.63531084061E+01
99.5% POINT OF T DISTRIBUTION = 0.63656803131E+02
97.5% POINT OF T DISTRIBUTION = 0.12706216812E+02

NOTE--TAG, COEF, TCOEF, RESSD, & CUMULATIVE RESSD
WRITTEN TO FILES DPST1F.DAT AND DPST2F.DAT

** YATES OUTPUT 3 **

THE YATES SWITCH HAS JUST BEEN SET TO 3

** YATES Y **

 ** 2**K DEX FIT **

(NOTE--DATA MUST BE IN STANDARD ORDER)

NUMBER OF OBSERVATIONS = 8
 NUMBER OF FACTORS = 3
 NO REPLICATION CASE

IDENTIFIER	EFFECT	T VALUE	RESSD MEAN+TERM	RESSD MEAN+TERMS
-----	-----	-----	-----	-----
MEAN	71.25000		13.71912	13.71912
1	23.00000	46.0*	6.57647	6.57647
13	10.00000	20.0*	13.64734	3.44964
2	-5.00000	-10.0	14.53444	1.54110
3	1.50000	3.0	14.79302	1.29099
12	1.50000	3.0	14.79302	0.50000
123	0.50000	1.0	14.81553	0.00000
23	0.00000	0.0	14.81834	0.00000

NOTE--TAG, COEF, TCOEF, RESSD, & CUMULATIVE RESSD
 WRITTEN TO FILES DPST1F.DAT AND DPST2F.DAT