TAGUCHI SN-

PURPOSE

Computes the Taguchi signal-to-noise (S/N) ratio for the "smaller is better" case.

DESCRIPTION

For this "smaller is better" case, the S/N ratio is defined as:

$$SN = -10 \times \log 10\left(\left|\frac{\sum y^2}{N}\right|\right) \qquad \textbf{(EQ 2-16)}$$

SYNTAX

LET <par> = TAGUCHI SN- <y> <SUBSET/EXCEPT/FOR qualification>
where <y> is a response variable;
<par> is a parameter where the computed Taguchi S/N ratio is stored;
and where the <SUBSET/EXCEPT/FOR qualification> is optional.

EXAMPLES

LET TAGUCHI = TAGUCHI SN- Y
LET TAGUCHI = TAGUCHI SN- Y SUBSET TAG = 5

DEFAULT

None

SYNONYMS

The word TAGUCHI is optional (i.e., SN- is a synonym for TAGUCHI SN-).

RELATED COMMANDS

TAGUCHI SN- PLOT	=	Generates a smaller is better signal-to-noise versus subset plot.
TAGUCHI SN0	=	Computes the target is better and variance is independent of the mean signal-to-noise ratio.
TAGUCHI SN00	=	Computes the target is better and variance is dependent on the mean signal-to-noise ratio.
TAGUCHI SN+	=	Computes the larger is better signal-to-noise ratio.

REFERENCE

"Statistical Methods and Applications," Jack Elliot, Allied Signal, 1987 (pp. 4-3, 4-4).

APPLICATIONS

Experiment Design and Quality Control

IMPLEMENTATION DATE

94/2

PROGRAM

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SKIP 25
READ GEAR.DAT DIAMETER BATCH
LET A = TAGUCHI SN- DIAMETER
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