

LOWESS PERCENT

PURPOSE

Sets the width of lowess smoothing (which carries out robust locally-weighted time series and scatter plot smoothing).

DESCRIPTION

For lowess smoothing, the analyst can vary the size of the smoothing window. This size is given as the percentage (0 to 100) of the data that the window should cover. The default window size is 10 (which states that the smoothing window has a total width of 10% of the horizontal axis variable). This width must be a decimal value between 0 and 100. To specify the width of the lowess smooth, use the LOWESS PERCENT command prior to using the LOWESS SMOOTH command.

SYNTAX

LOWESS PERCENT <w>

where <w> is a number or a parameter in the range 0 to 100 (exclusive).

EXAMPLES

```
LOWESS PERCENT 30
LOWESS PERCENT 45
LOWESS PERCENT P
LET W = 45
LOWESS PERCENT W
LOWESS SMOOTH Y X
```

DEFAULT

The default width is 10 (that is, 10% of the range of the horizontal axis variable).

SYNONYMS

LOWESS PROPORTION

RELATED COMMANDS

LOWESS SMOOTH	=	Carries out lowess smoothing.
LOWESS FRACTION	=	Sets the width as a fraction.
LOWESS DEGREE	=	Specifies whether the LOWESS SMOOTH command performs linear or quadratic local fitting.
SMOOTH	=	Carries out least squares smoothing.
FILTER WIDTH	=	Sets the smoothing width for least squares smoothing.

APPLICATIONS

Robust Smoothing, Time Series Analysis

IMPLEMENTATION DATE

88/7

PROGRAM

```

SERIAL READ Y
18 14 25 19 13 31 14 13 28 14 11 21 20 16 31
15 21 18 25 23 32 13 15 25 43 20 18 20 21 34
END OF DATA
SERIAL READ X
130 225 95 100 170 65 175 130 80 150 150 107 122 110 52
72 110 97 92 90 70 130 130 88 48 85 139 103 110 65
END OF DATA
.
MULTIPLY 2 2; MULTIPLY CORNER COORDINATES 0 0 100 100
CHARACTER X BLANK; LINES BLANK SOLID; TITLE LOWESS SMOOTH
.
LOWESS PERCENT 20
XLABEL LOWESS PERCENT = 20
LOWESS SMOOTH Y X
PLOT Y PRED VS X
LOWESS PERCENT 30
X1LABEL LOWESS PERCENT = 30
LOWESS SMOOTH Y X
PLOT Y PRED VS X
LOWESS PERCENT 50
X1LABEL LOWESS PERCENT = 50
LOWESS SMOOTH Y X
PLOT Y PRED VS X
LOWESS PERCENT 70
X1LABEL LOWESS PERCENT = 70
LOWESS SMOOTH Y X
PLOT Y PRED VS X
END OF MULTIPLY

```

