POLYNOMIAL DEGREE

PURPOSE
Specifies the polynomial degree for certain variations of the SMOOTH, SPLINE FIT, and FIT commands.

DESCRIPTION
The syntax for the SMOOTH, SPLINE FIT, and FIT commands allows the analyst to embed the desired degree directly in the command, as a pre-word, as in

CUBIC SMOOTH Y
QUINTIC SPLINE FIT Y X K
QUARTIC FIT Y X
If the analyst chooses not to use such a pre-word, the degree information can be conveyed via the POLYNOMIAL DEGREE command, as in

POLYNOMIAL DEGREE 3
SMOOTH Y
POLYNOMIAL DEGREE 5
SPLINE FIT Y X K
POLYNOMIAL DEGREE 4
FIT Y X
In practice, embedding degree information directly in the command is much more popular than using the POLYNOMIAL DEGREE command.

SYNTAX
POLYNOMIAL DEGREE <n>
where <n> is an integer number or parameter that is the desired degree of the polynomial in certain forms of the FIT, SPLINE FIT, and SMOOTH commands.

EXAMPLES
POLYNOMIAL DEGREE 3
POLYNOMIAL DEGREE 1

NOTE
The POLYNOMIAL DEGREE command with no arguments reverts the polynomial degree to default.

DEFAULT
For smoothing --1 (= linear);
for spline fitting--3 (= cubic);
for fitting --1 (= linear).

SYNONYMS
None

RELATED COMMANDS
FIT = Carries out a least squares fit.
SPLINE FIT = Carries out a spline fit.
SMOOTH = Carries out a smoothing.
FILTER WIDTH = Set the filter width for the SMOOTH command.

APPLICATIONS
Fitting and smoothing

IMPLEMENTATION DATE
Pre-1987

PROGRAM
SKIP 25; READ BERGER1.DAT Y X
POLYNOMIAL DEGREE 2
FIT Y X