

## NORMAL PLOT

### PURPOSE

Generates a normal plot.

### DESCRIPTION

A normal plot is a normal probability plot, but with the data on the horizontal axis and neat probability values on the vertical axis. The plot consists of the following 4 components:

1. The raw data;
2. A fitted line to the raw data;
3. A horizontal 50% line;
4. A vertical 50% line.

The characteristics of these components are controlled through the LINE and CHARACTER commands.

### SYNTAX 1

NORMAL PLOT <y> <SUBSET/EXCEPT/FOR qualification>

where <y> is a response variable;

and where the <SUBSET/EXCEPT/FOR qualification> is optional.

### SYNTAX 2

NORMAL PLOT <y> <tag> <SUBSET/EXCEPT/FOR qualification>

where <y> is a response variable;

<tag> is a censoring variable (values equal to 0 are omitted from the plot);

and where the <SUBSET/EXCEPT/FOR qualification> is optional.

### EXAMPLES

NORMAL PLOT Y1

### NOTE

The following internal parameters are saved after a NORMAL PLOT. These parameters can be used like any user created parameter by the analyst.

SIGMA	-	the slope of the fitted line
MU	-	the intercept of the fitted line
SDSIGMA	-	the standard deviation of SIGMA
SDETA	-	the standard deviation of MU
BPT1	-	the 0.1% point of the best fit distribution
BPT5	-	the 0.5% point of the best fit distribution
BP1	-	the 1% point of the best fit distribution
BP5	-	the 5% point of the best fit distribution
BP10	-	the 10% point of the best fit distribution
BP20	-	the 20% point of the best fit distribution
BP50	-	the 50% point of the best fit distribution
BP80	-	the 80% point of the best fit distribution
BP90	-	the 90% point of the best fit distribution
BP95	-	the 95% point of the best fit distribution
BP99	-	the 99% point of the best fit distribution
BP995	-	the 99.5% point of the best fit distribution
BP999	-	the 99.9% point of the best fit distribution

### DEFAULT

None

### SYNONYMS

None

## RELATED COMMANDS

LINES	=	Sets the type for plot lines.
NORMAL PROBABILITY PLOT	=	Generates a normal probability plot.
HISTOGRAM	=	Generates a histogram.
QUANTILE-QUANTILE PLOT	=	Generates a quantile-quantile plot
BOX PLOT	=	Generates a box plot
PLOT	=	Generates a data or function plot.

## APPLICATIONS

Exploratory Data Analysis

## IMPLEMENTATION DATE

90/5

## PROGRAM

```
LET Y1 = NORMAL RANDOM NUMBERS FOR I = 1 1 100
LINE SOLID DASH DOT DOT
TITLE AUTOMATIC
NORMAL PLOT Y1
```

