

PARETO PLOT

PURPOSE

Generates a Pareto plot.

DESCRIPTION

A Pareto plot is an ordered (largest to smallest) histogram with carry-along tags. The Pareto plot is used to answer the question: "Which data values are most important, and which are least important?" The Pareto plot consists of:

Vertical axis = ordered response value;

Horizontal axis = dummy index (1 to n) where n is the number of response values.

The appearance of the trace is controlled by the first setting of the LINES, CHARACTERS, SPIKES, BARS, and their related attribute setting commands.

SYNTAX

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

where <y> is the response variable;

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

EXAMPLES

```
PARETO PLOT Y
```

```
PARETO PLOT Y SUBSET LAB 2
```

NOTE 1

The carry-along tags are normally generated by specifying them in the CHARACTERS command. This is demonstrated in the program example below. Be aware that they are limited to 4 characters with this method. If more than 4 characters are required, then use the MOVEDATA and TEXT commands to plot them. The following provides an example (assume the carry-along tags are stored in strings S1 thru SN):

```
PARETO PLOT Y
LET N = SIZE Y
LOOP FOR K = 1 1 N
    LET XCOORD = XPLOT(K)
    LET YCOORD = YPLOT(K)
    MOVEDATA XCOORD YCOORD
    TEXT ^S^K
END OF LOOP
```

NOTE 2

Many analysts prefer to draw Pareto plots as bar charts. This can be accomplished by entering the following:

```
LINE BLANK
BAR ON
```

The attributes of the bars can be set with the various bar attribute setting commands. The Pareto plot can just as easily be drawn with spikes (SPIKE ON) as well.

DEFAULT

None

SYNONYMS

None

RELATED COMMANDS

CHARACTERS	=	Sets the type for plot characters.
CHARACTER OFFSET	=	Sets the horizontal and vertical offset for characters.
CHARACTER ANGLE	=	Sets the angle for characters
LINES	=	Sets the type for plot lines.
SPIKES	=	Sets the on/off switches for plot spikes.
BARS	=	Sets the on/off switches for plot bars.

BAR FILL = Sets the on/off switches for plot bar fills.
 BAR DIMENSION = Sets the dimension (2 or 3) for bars.
 BAR WIDTH = Sets the widths for plot bars.
 FONT = Sets the font.
 PLOT = Generates a data or function plot.
 CONTROL CHART = Generates various types of control charts.

APPLICATIONS

Quality Control

IMPLEMENTATION DATE

88/9

PROGRAM

```

LET Y = DATA 9 4 13 11 19 8 11 10
CHARACTERS CA FL IL MA NE NY OR TX
CHARACTERS OFFSET 2 2 ALL
SPIKE ON ALL
TITLE 1986 AUTO GAS TAX
PARETO PLOT Y
    
```

