UPPER QUARTILE

PURPOSE

Compute the upper quartile of a variable.

DESCRIPTION

The upper quartile is the 75% point of the variable. That is, it is the point with 75% of the observations below it and 25% of the observations above it.

SYNTAX

LET <par> = UPPER QUARTILE <y> <SUBSET/EXCEPT/FOR qualification>
where <y> is a variable;
<par> is a parameter where the computed upper quartile is saved;
and where the <SUBSET/EXCEPT/FOR qualification> is optional.

EXAMPLES

LET UQ = UPPER QUARTILE Y1
LET UQ = UPPER QUARTILE Y1 SUBSET TAG = 2

NOTE

To compute a given percentile, DATAPLOT first sorts the data. Then an index is calculated as P*(N+1) where P is the given percentile (e.g., .75 for the upper quartile). This index identifies the element in the sorted data set that is the percentile value. Since this computed index will typically not be an integer, an appropriate weighted average is computed between the value corresponding to the index and the value corresponding to the index + 1.

DEFAULT

None

SYNONYMS

None

RELATED COMMANDS

QUARTILE PLOT	=	Generate a quartile versus subset plot.
MINIMUM	=	Compute the minimum of a variable.
MAXIMUM	=	Compute the maximum of a variable.
LOWER QUARTILE	=	Compute the lower quartile of a variable.
LOWER HINGE	=	Compute the lower hinge of a variable.
UPPER HINGE	=	Compute the upper hinge of a variable.
DECILE	=	Compute the decile of a variable.
MEAN	=	Compute the mean of a variable.
STANDARD DEVIATION	=	Compute the standard deviation of a variable.

APPLICATIONS

Exploratory Data Analysis

IMPLEMENTATION DATE

Pre-1987

PROGRAM

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LET Y1 = NORMAL RANDOM NUMBERS FOR I = 1 1 1000
LET Q = UPPER QUARTILE Y1
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