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

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APPLICATIONS
Exploratory Data Analysis

IMPLEMENTATION DATE
Pre-1987

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