NAME
statistic − Read numerical data and write descriptive statistics.

SYNOPSIS
cat data | ${HOME}/bin/exe/statistic 5 7 4

DESCRIPTION
This program reads numbers one per line from standard-in, and upon reaching end-of-file it writes a single line of statistics describing the dataset. The statistics this program can compute are listed below, and are specified by number as command-line parameters.

1   number of observations
2   lowest value
3   highest value
4   sum
5   mean
6   median
7   standard deviation

Statistics 1−5 can be computed for any number of input data, but if the median or standard deviation is required it is necessary to store the values and space is provided for 1000 of them.

UNITS
0   usage instructions and and error messages
5   input data
6   statistics reported

DIAGNOSTICS
The possible return codes are summarized below.

0   all went well
1   usage instructions were printed
2   a command-line parameter was not an integer in the range 1...7
3   more than 1000 data points were input for storage
4   no data points were input
5   a error occurred reading a data value

SEE ALSO
stat, a Unix routine that displays file system status and has nothing to do with statistics

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EXAMPLE
```
unix[1] cat data
1
2
3
4
5
6
unix[2] cat data | statistic 5 7 4
  3.500000E+00  1.870829E+00  2.100000E+01
```

Here the program prints the mean of the observations, their standard deviation, and their sum.


```
unix[3] echo "the median value is `cat junk | statistic 6`"
the median value is   3.500000E+00
unix[4]
```

This example shows how the program might be used in a shell script.