NAME
histogram − Plot a histogram from data.

SYNOPSIS
cat data | ${HOME}/bin/exe/histogram [bins]

DESCRIPTION
The program reads up to 30000 numbers, one per line, from standard-in. If a positive integer is provided for the optional command-line parameter, the number of histogram bins is set to that value. Then the program calls HIST to compute the histogram (the sample probability distribution function or PDF) and the inverse cumulative distribution function (the inverse CDF, which can be used to generate variates from the distribution). If the number of bins was not specified, HIST uses Sturges' Rule to determine how many to use. Next the program finds the display width from ${COLUMNS}, or assumes 80 columns by default. Using this margin, the program calls PRNHST to print a histogram on the workstation screen. Finally, it writes plotting coordinates for the sample pdf in /tmp/pdf and plotting coordinates for the inverse cdf in /tmp/cdfi. To compute the coordinates of the inverse CDF it uses INTERP.

UNITS and FILES
0	error messages
5	input data
6	output screen display of histogram
9	plotting coordinates in /tmp/pdf and /tmp/cdfi

SEE ALSO
HIST, PRNHST, and INTERP, which are invoked by this program

DIAGNOSTICS
These are the possible return codes.

0	all went well
1	too many observations
2	bad input data
3	failure of HIST
4	failure of PRNHST

EXAMPLE
```
unix[1] export COLUMNS=40
unix[2] cat data | histogram
   -71.30 ....
   -52.96 ..........
   -34.63 ..................
   -16.29 .................
     2.05 .............................
    20.38 .............................
    38.72 .....................
    57.06 ................
    75.39 ...............
    93.73 ....
   112.07 ..
   130.40
```