

Johns Hopkins Engineering

625.464 Computational Statistics

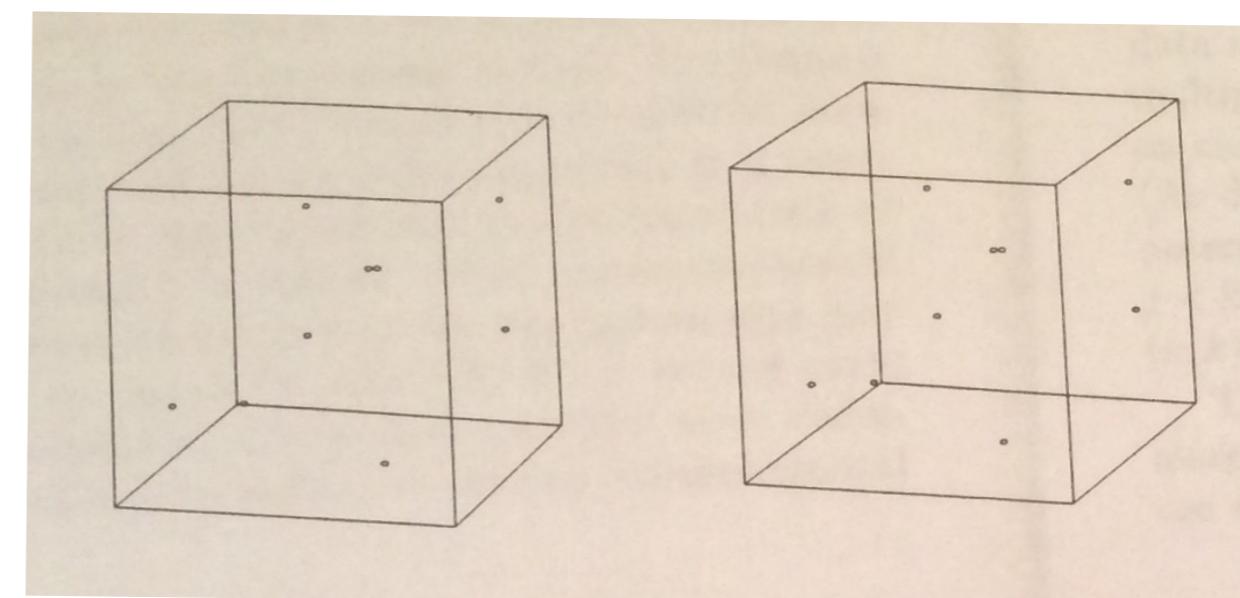
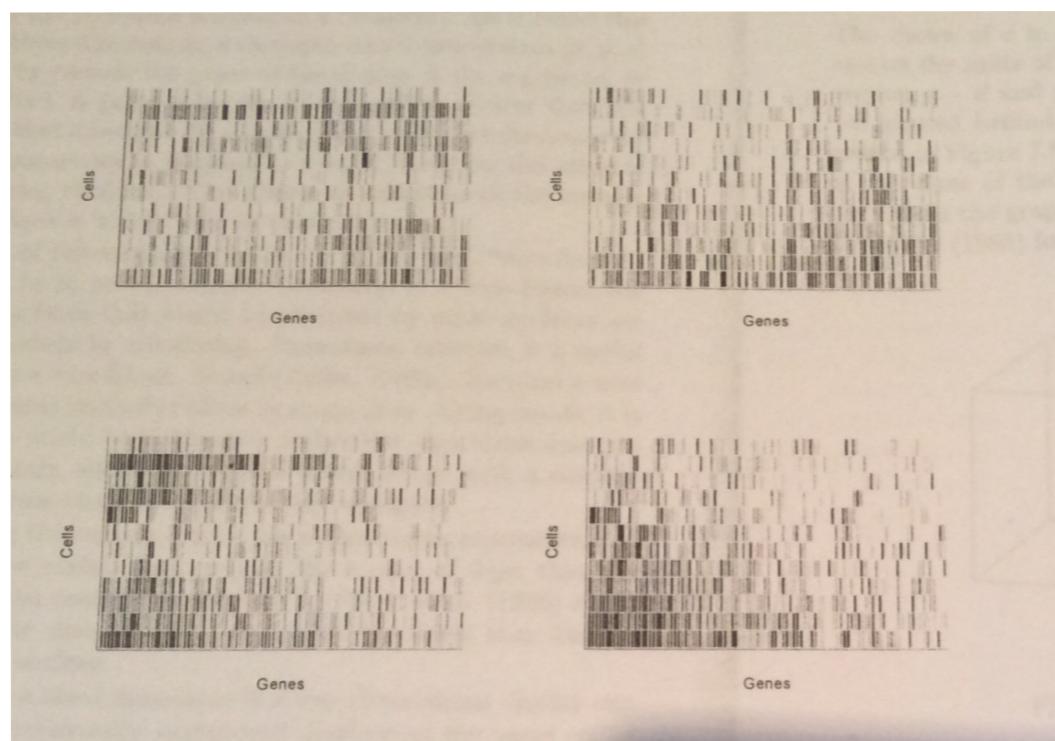
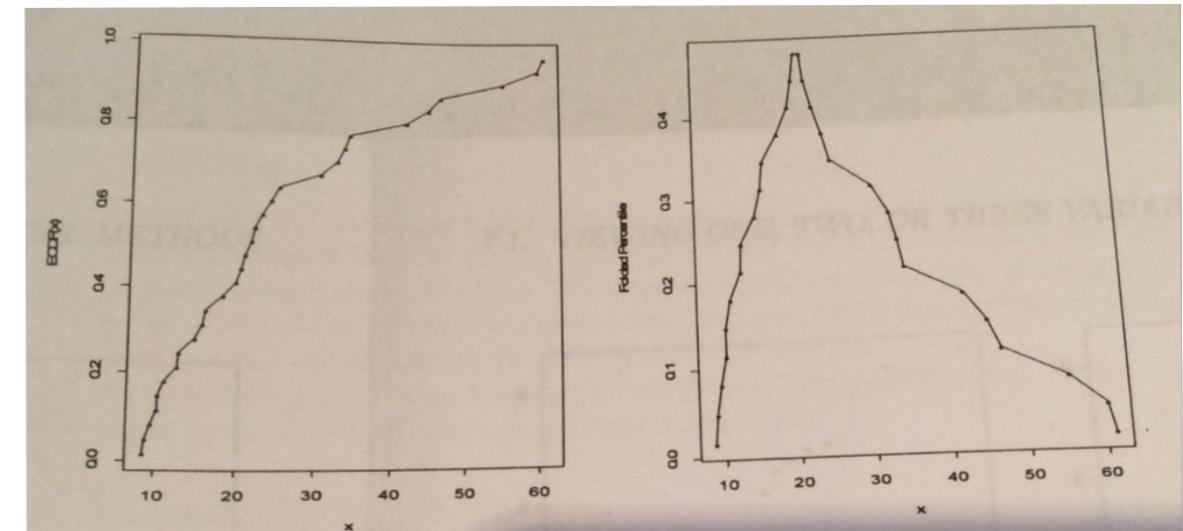
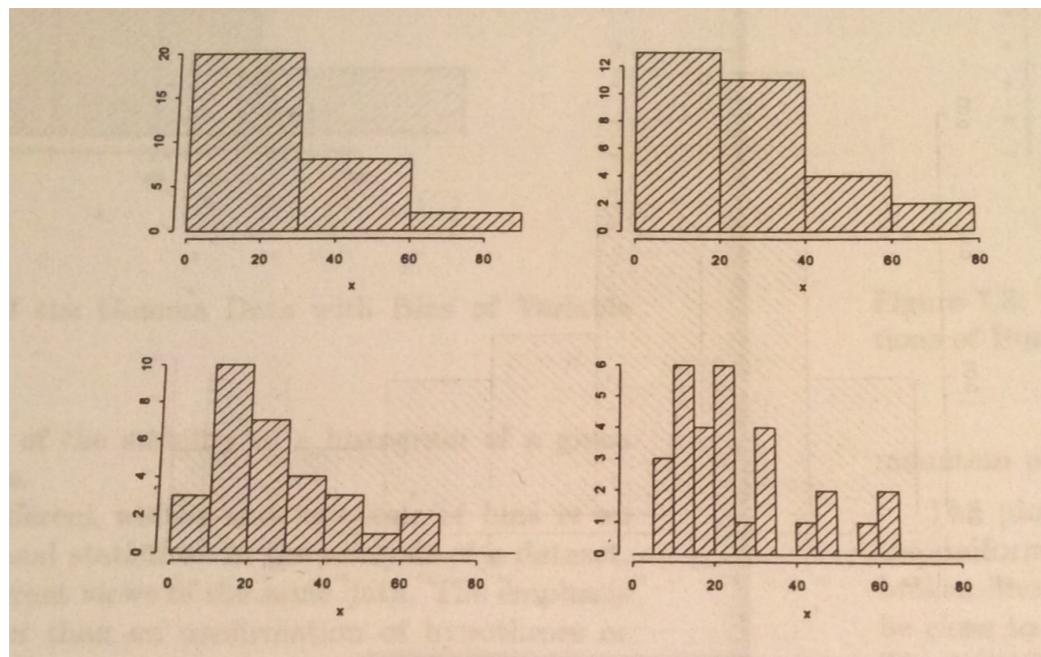
Graphical Methods Histograms

Module 13 Lecture 13A



JOHNS HOPKINS
WHITING SCHOOL
of ENGINEERING

Graphical Methods in Computational Statistics



Viewing One, Two, or Three Variables

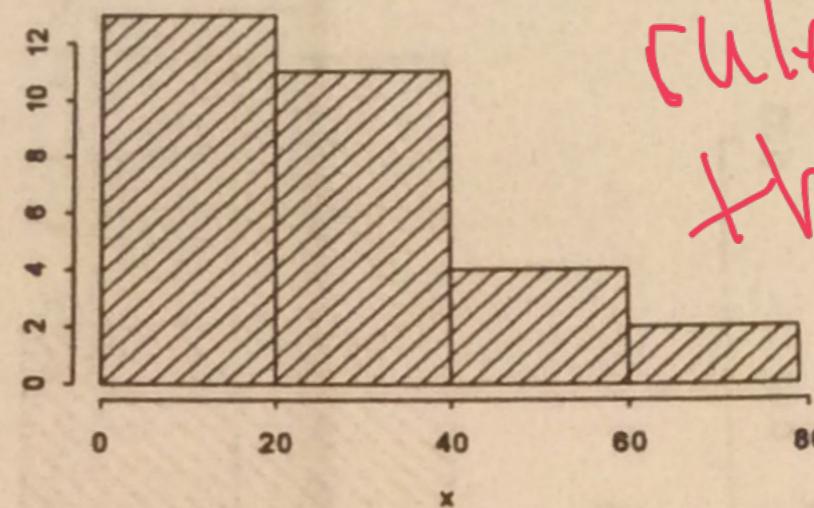
- plots of 1 or 2 variables are easy to construct & interpret
- often can use the same tech. for 3, but not 4 or more
- if 4 or more variables, sometimes to look at subsets of 1,2, or 3 or projections into 1, 2, or 3-dim.

The Histogram

- a graph of the counts or rel freq. of the data within contig. regions called bins
- the vertical axis is the counts in the bins or prop - so that the total area sums to one
- . the formation of the bins is fund. to visualizing and understanding the data

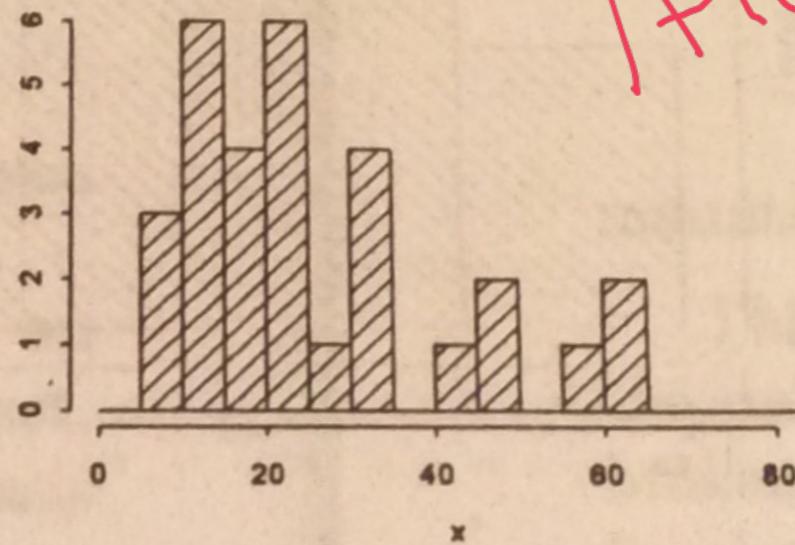
Number of Bins

of bins ↑
as # of obs ↑

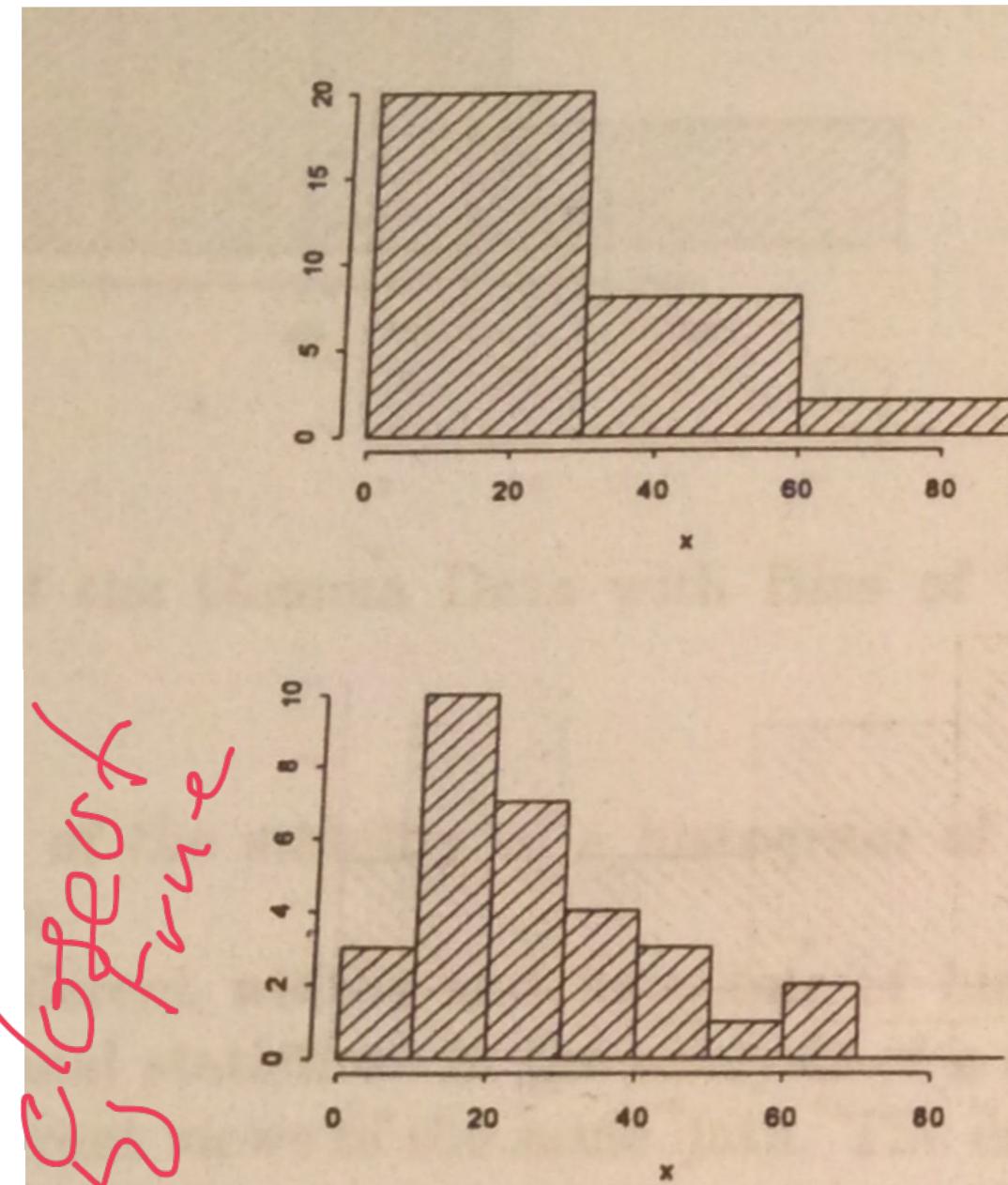


rule of thumb

use



1+log n

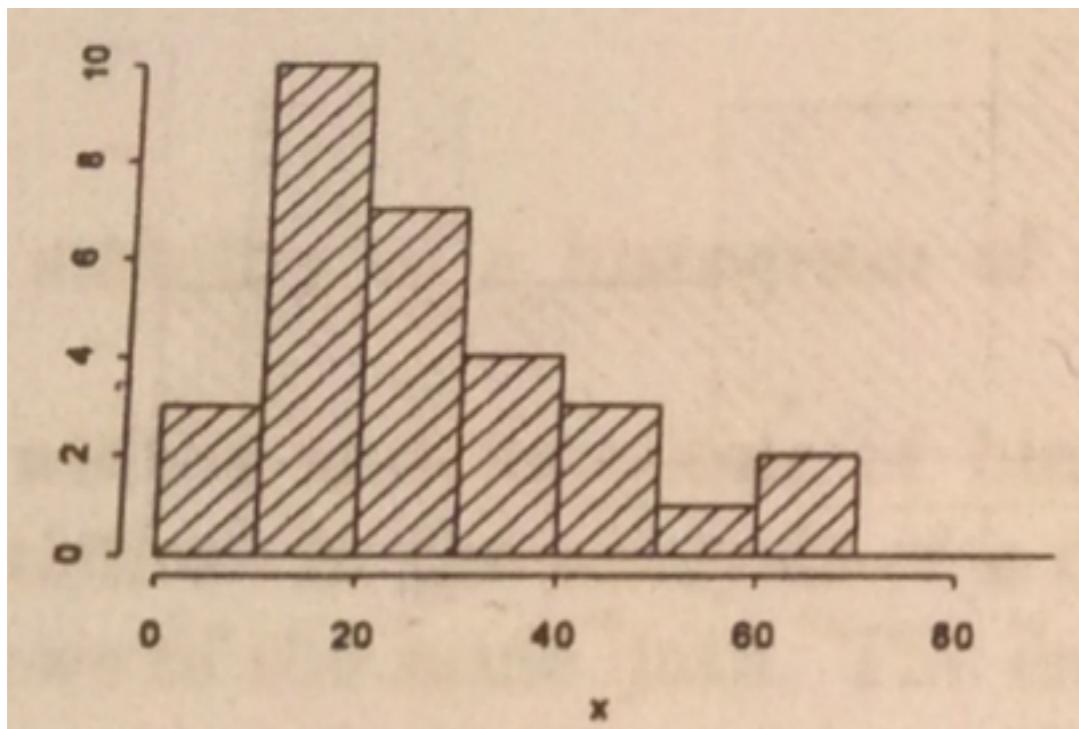


Closest curve

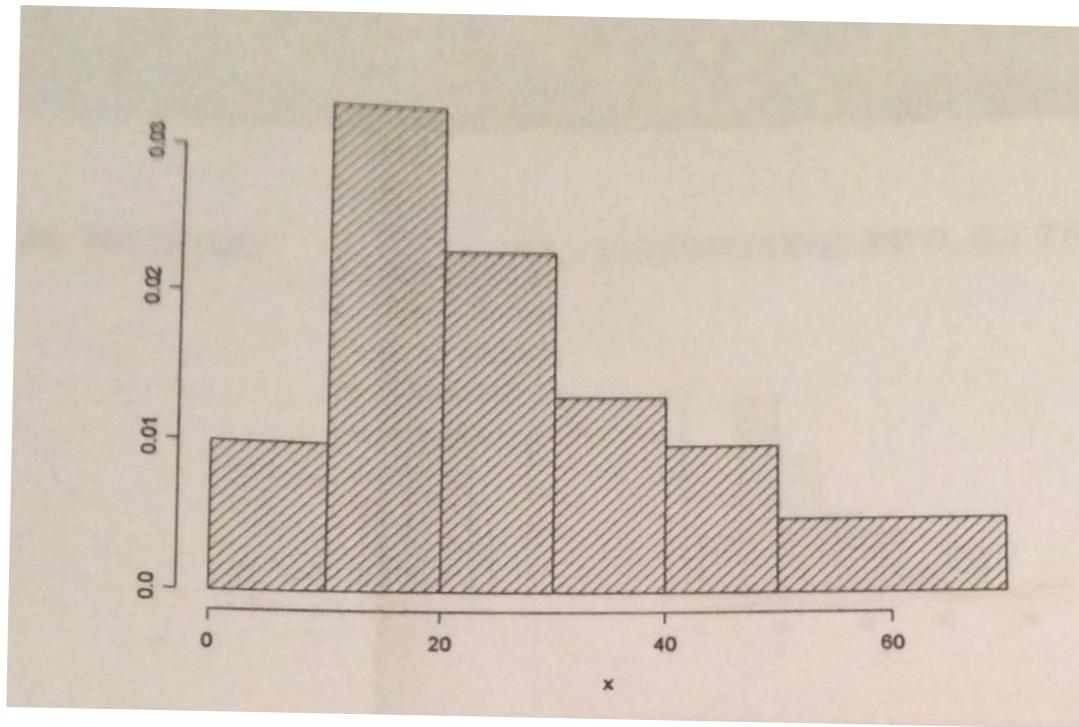
30 points from a gamma dist w/ shape para 3
and scale para 10

3
10

Binwidth

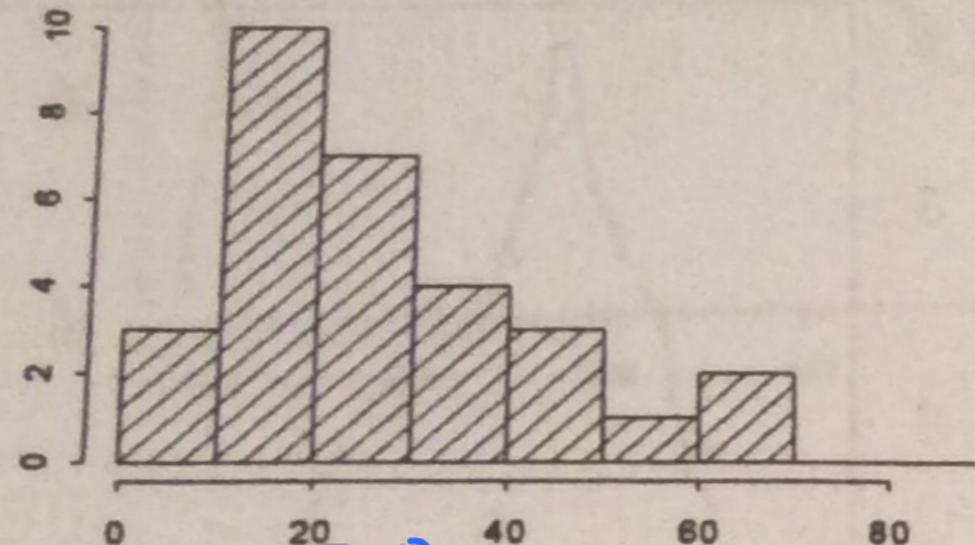


Same 3D p+s
from $\Gamma(3, 10)$

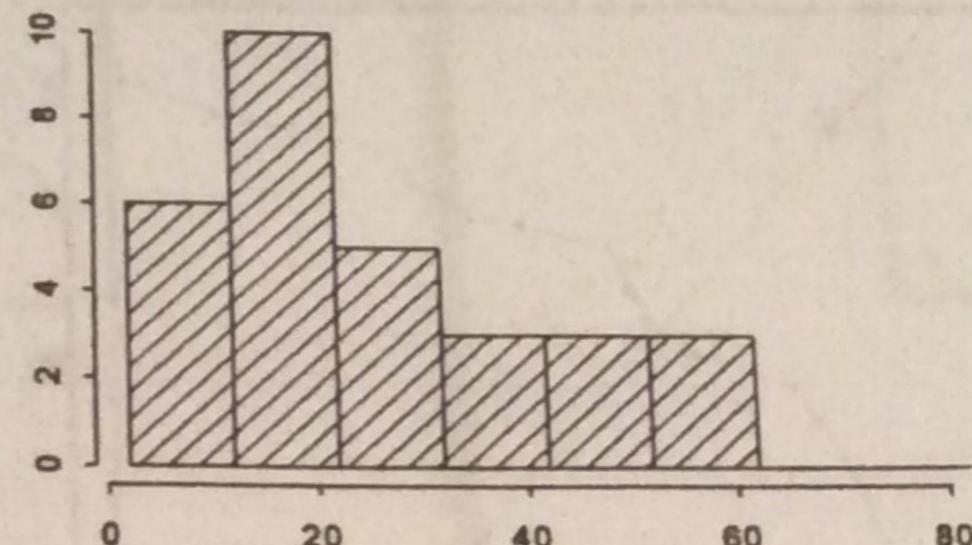


Combined last
two bins

Cutpoint Location



0, 10, 20, x, .



2, 12, 22, 32,

