5.2 Describing Data with Graphs
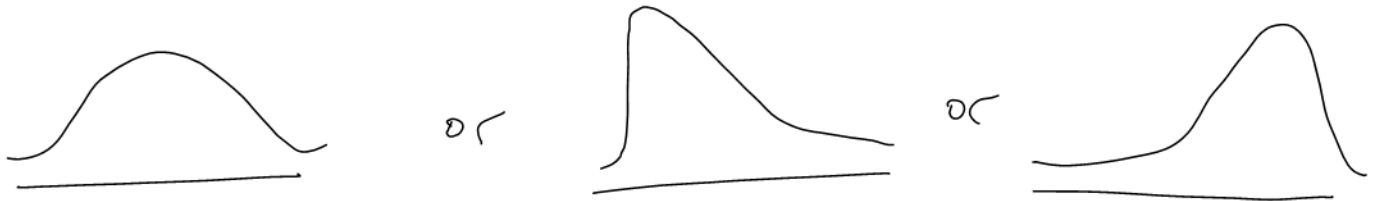
Graphs are a visual way
to summarize data.

See handout on website.
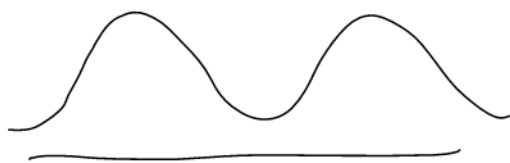

5.3 Histograms

Bar charts for quantitative variables
are called histograms.

The data distribution is unimodal
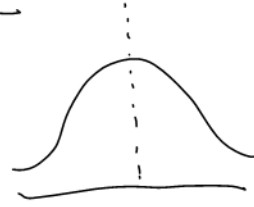if there is 1 peak.

or

or

The data distribution is bimodal
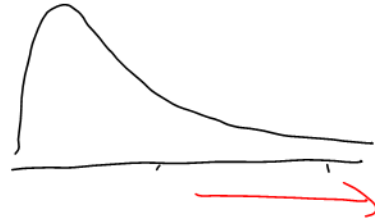if there are 2 peaks of roughly
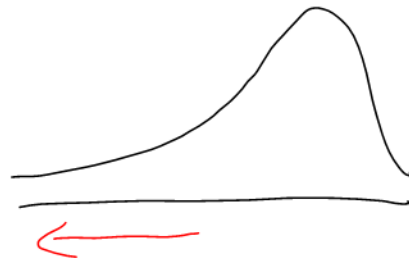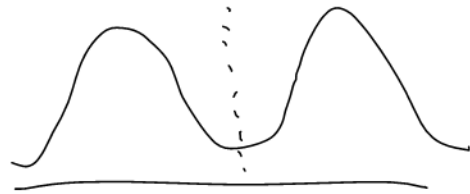equal heights.

COMMON SHAPES

unimodal symmetrical

unimodal skewed right
(tail is to the right)

unimodal skewed left
(tail is to the left)

bimodal
symmetrical

- In theory there are other shapes
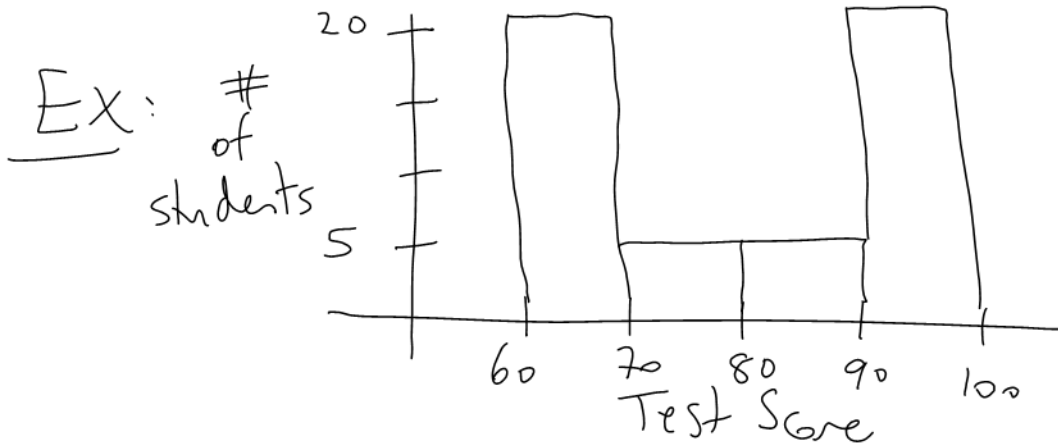- We'll choose the closest option from these 4.

Outliers

Measurements that are far from most other measurements.

Quick Ex:

# of responses

# of siblings

5 and 6 are outliers.
Shape is unimodal skewed right.

Ex: # of students

Test Score

a) Describe the shape.
   Bimodal symmetrical

b) Any outliers?
   No

c) Find the mode or modes.
Mode: the value where the peak occurs.
   60-70 and 90-100

d) What % of students scored under 80?

$$\frac{25}{50} = 0.5 \quad \text{or} \quad 50\%$$