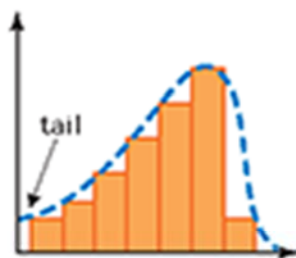


## 10.3 (pg.452) Shapes of Distribution & Appropriate Measures

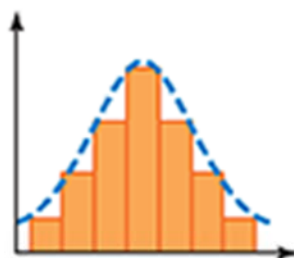
You can use **dot plots** and **histograms** to identify shapes of distributions.

### Symmetric and Skewed Distributions



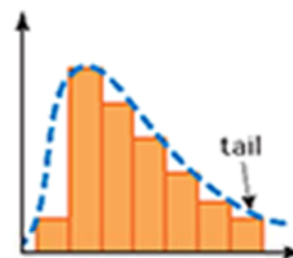
*Skewed left*

- The "tail" of the graph extends to the left.
- Most data are on the right.



*Symmetric*

- The left side of the graph is a mirror image of the right side of the graph.



*Skewed right*

- The "tail" of the graph extends to the right.
- Most data are on the left.

You can use a **measure of center** and a **measure of variation** to describe the distribution of a data set. The shape of the distribution can help you choose which measure are the most appropriate to use.

The **MAD** uses the mean in its calculation, so when a data distribution is symmetric,

- Use the **mean** to describe the center and
- Use the **MAD** to describe the variation.

The **IQR** uses quartiles in its calculation. So, when a data distribution is skewed,

- Use the **median** to describe the center and
- Use the **IQR** to describe the variation