

Name: _____

Date: _____

Mean, Mode and Range

The **mean** is the average. The average is an important measure of central tendency for a series of values. To find the mean we use

$$\text{Mean} = \frac{\text{sum of the values}}{\text{number of values}}$$

Symbol: \bar{x}

Example

Calculate the average of the following set of numbers. $S = \{3, 5, 6, 7, 9\}$

$$\frac{3+5+6+7+9}{5} = \frac{30}{5} \quad \bar{x} = 6$$

The **mode** is the value that appears most often in a set of data

Example

Find the mode in the following set of numbers $S = \{1, 2, \underline{3}, 5, \underline{3}, 6, 2, 7, \underline{3}, 9\}$

$$\text{Mode} = 3$$

The **range** measures the dispersion for a given set of numbers.

To calculate the range for a set of numbers, we need to identify the minimum and maximum value in the number set.

Example

Determine the range of the following set of numbers. $S = \{\cancel{3}, \cancel{5}, \cancel{2}, \cancel{8}, \cancel{7}, \cancel{3}, \cancel{8}, \cancel{5}\}$

① Arrange the data from smallest to biggest

$$2, 3, 3, 5, 5, 7, 8, 9$$

$$\text{② range} = x_{\max} - x_{\min} = 9 - 2 = 7$$