## Algebra 2

## 9-00 Measures of Center and Dispersion

## Measure of central tendency

- A number used to represent the $\qquad$ or $\qquad$ of a set of data values.

Mean
-
, of $n$ numbers is the $\qquad$ of the numbers divided by $\qquad$ .

$$
\bar{x}=\frac{x_{1}+x_{2}+\cdots+x_{n}}{n}
$$

Median

- ___ number when the numbers are written in $\qquad$ . (If $n$ is even, the median is the
$\qquad$ of the two $\qquad$ numbers.)


## Mode

- Number or numbers that occur most $\qquad$ . There may be $\qquad$ mode, $\qquad$ mode, or mode.
The winning scores of 6 baseball games are $5,7,8,5,10,3$. Find the mean, median, and mode.


## Measure of dispersion

- Statistic that tells you how $\qquad$ or $\qquad$ data values are.


## Range

- $\qquad$ between the $\qquad$ and $\qquad$ data values.

$$
\text { Range }=\max -\min
$$

## Standard deviation

- Describes the $\qquad$ differences (or deviation) between a data's $\qquad$ and the $\qquad$ .

$$
\sigma=\sqrt{\frac{\left(x_{1}-\bar{x}\right)^{2}+\left(x_{2}-\bar{x}\right)^{2}+\cdots+\left(x_{n}-\bar{x}\right)^{2}}{n}}
$$

Find the standard deviation of the following data set.
4,8,12,15,3

Finding the standard deviation on a graphing calculator

## TI calculator

1. [STAT] $\rightarrow$ Edit, Enter data values in L1 (clear list first)
2. [STAT] $\rightarrow$ CALC $\rightarrow$ 1-Var Stats, [ENTER] x 2 , Find $\sigma \mathrm{x}$

## NumWorks

1. Select Statistics from home
2. In Data tab
3. Enter data in Value V1 list
4. In Stats tab
5. Read standard deviation from list

463 \#1-2, 464 \#1-7 = 9

