

## 1/7 Algebra 1 - Downing

Downings Website: [www.downingmath.weebly.com](http://www.downingmath.weebly.com)

Book Website: [www.bigideasmath.com](http://www.bigideasmath.com)

Latwork can be turned in up until the day of the Unit Test

### Unit 5 - Data and Statistics

Mean - is the sum of the data divided by the number of data values.  
(Average) the symbol  $\bar{x}$  represents the mean. It is read "x-bar"

Median - is the middle number when the values are written  
(middle) in numerical order. When there is an even number, find the mean of the two middle values.

Mode - is the value or values that occur most often.  
(most) There may be one mode, no mode, or more than one mode.

Put in order from least to greatest.

Ex)  $8.25, 8.25, 8.45, 8.65, 8.75, 9.10, 9.25, 16.50$

$$\text{mean } \bar{x} = \frac{8.25 + 8.25 + 8.45 + 8.65 + 8.75 + 9.10 + 9.25 + 16.50}{8} = \frac{77.2}{8} = \boxed{9.65}$$

$$\text{Median} = \frac{8.65 + 8.75}{2} = \frac{17.4}{2} = \boxed{8.7}$$

$$\text{Mode} = 8.25$$

\* Which measure of center best represents the data? Explain.

Median is best,  $\bar{x}$  mean is more than most of the data and the mode is less than most of the data.

Ex) Team scores 21, 7, 35, 14, 42 points in first 5 games.  
How many points needed in 6<sup>th</sup> game to average 26 points.  
(6<sup>th</sup> game = x)

$$\frac{21+7+14+35+42+x}{6} = 26$$

$$\textcircled{x} \frac{119+x}{6} = 26 \textcircled{6}$$

$$\begin{array}{r} 119+x = 156 \\ -119 \quad -119 \\ \hline \boxed{x = 37 \text{ points}} \end{array}$$

Range - is the largest number minus the smallest number

Ex) Find the measures of Center + Range.

Put numbers in order

19, 20, 20, 21, 22, 25, 27, 27, 29, 29, 30, 31

$$\bar{x} = \frac{300}{12} = 25$$

$$\text{Median} = \frac{25+27}{2} = 26$$

$$\text{Mode} = 20, 27, 29$$

$$\text{Range} = 31 - 19 = 12$$

HW 11.1 pg. 590 #5-10, 13-16 online