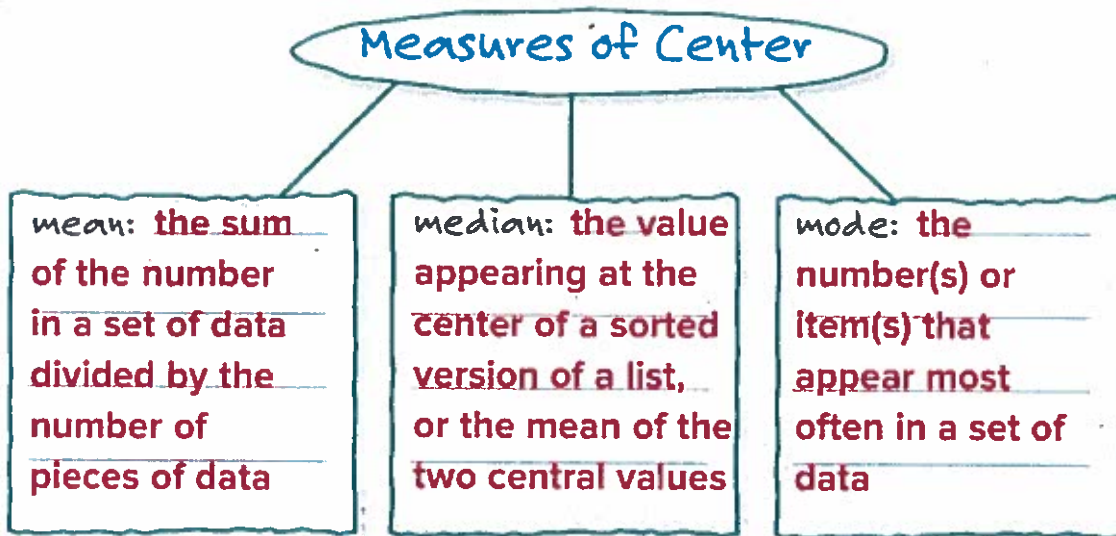


Chapter 11 Lesson 1 and 2: Mean, Median and Mode

Measures of Center: mean, median and mode are called measures of center because they describe the center of a set of data.



Mean: "The mean teacher AVERAGES your grades"

Median: MIDDLE (arrange least to greatest and find the middle value)

Mode: MOST

Range: Difference between the largest and the smallest value

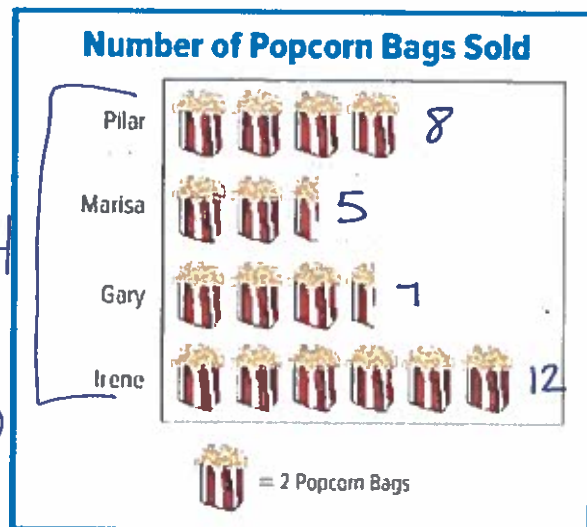
Examples:

Find the mean.

$$8 + 5 + 7 + 12 = 32$$

$$\begin{array}{r} 8 \\ 4 \overline{) 32} \\ \underline{-32} \\ 0 \end{array}$$

mean = 8 bags of popcorn



$$\begin{array}{r} 88 \\ \sqrt{528} \\ -48 \\ \hline 48 \\ -48 \\ \hline 0 \end{array}$$

A stem-and-leaf plot is a display that organizes data from least to greatest. The digits of the least place value form the leaves, and the next place-value digits form the stems. The stem-and-leaf plot shows Marcia's scores on several tests. Find the mean test score.

$$88\%$$

Stem	Leaf
7	8
8	5 8 9
9	2 6

718 = 78

$$\begin{array}{r} 78 \\ 85 \\ 88 \\ 89 \\ 92 \\ +96 \\ \hline 528 \end{array}$$

Describe the cost of CDs using the measures of center.

11.95, 12.59, 12.89, 18.49, 19.99, 19.99

Cost of CDs (\$)		
11.95	12.89	19.99
19.99	12.59	18.49

Mean: $95.9 \div 6 = 15.98$

Median: $12.89 + 18.49 = 31.38 \div 2 = 15.69$

Mode: 19.99

Describe: The mean is \$15.98, the median is \$15.69. The mode is \$19.99. The mode is about \$4 higher than the other two measures of center.

PS Persevere with Problems The table shows the number of minutes spent doing different exercises. The mean time spent exercising was 18.2 minutes. How many minutes were spent doing sit-ups? (Lesson 2)

15 minutes

Daily Exercises	
Exercise	Time (min)
Pull-ups	8
Push-ups	10
Running	38
Sit-ups	<input type="text"/>
Weight lifting	20

} 5

$$8 + 10 + 38 + x + 20 = 18.2 \cdot 5$$

$$8 + 10 + 38 + x + 20 = 91$$

$$\begin{array}{r} 76 + x = 91 \\ -76 \quad -76 \end{array}$$

$$x = 15$$