

Name _____

Date _____



Objective 9 TEKS 8.12.A Review

8.12.A Select the appropriate measure of central tendency or range to describe a set of data and justify the choice for a particular situation.

Use definitions and calculations of measures of central tendency and the range to describe data.

Mean	Median	Mode	Range
Average of numbers	Middle value of numbers	Value or values that occur most often	Spread of data from the least to the greatest value
Add all the numbers in the data set and then divide by the number of items in the data set.	List the numbers from least to greatest. Choose the middle number. If there are 2 middle numbers, take the average of their values.	A data set can have no mode, one mode, or more than one mode.	Subtract the least value from the greatest value.

EXAMPLE Anna scored the following points in 5 rounds of a word game: 90 55 66 55 39

If she scores 55 points in the next round, which measure will change?

Mean: $\frac{39 + 55 + 55 + 66 + 90}{5} = \frac{305}{5} = 61$ Median: 39 55 55 66 90

Mode: 39 55 55 66 90 Range: 90 - 39 = 51

A score of 55 points in the next round will not affect the median, mode, or range.

$360 \div 6 = 60$ Calculate the new mean.

The median, mode, and range are not affected if Anna scores 55 points in the next round. The mean is affected by the change in data since it decreases from 61 to 60.

YOU DO IT Which measure of central tendency or range has the least value?

112 180 103 156 109

Median: Order least to greatest 103, 109, 112, 156, 180
The median is 112.

Mode: Since each number occurs only once, there is no mode.

Range: The range is 180 - 103 = 77.

Mean: $\frac{\boxed{103} + \boxed{109} + \boxed{112} + \boxed{156} + \boxed{180}}{\boxed{5}} = \frac{\boxed{660}}{\boxed{5}} = \underline{132}$

The measure of central tendency or range with the least value is the range.