Mean, Median, Mode and Range

Mean –

Examples:
1. Matthew's test grades are 80, 92, 85, 91, and 88. Find the mean of his grades.

2. To qualify for a donut eating competition, Sally must average eating 15 donuts in 10 minutes. In her practice trials Sally ate 16, 12, 15, 15, 11, and 13. What is the mean of donuts Sally eats? Can she enter the competition?

Median –

Examples:
1. Find the median for the given set of numbers 3, 7, 9, 8, 4, 6, 2, 7, 9, 10, 6.

What is the median of the data set?

2, −4, 1, 7, −3, 0, −2, 6, 3, −1, −5, 4

Mode –

Examples:
1. Find the mode for the given set of numbers 3, 7, 9, 8, 4, 6, 2, 7, 9, 10, 6.

2. Find the mode weight of the textbooks in a student's locker: 12, 14, 16, 18, 18, 20.

Range –

Examples:
1. Find the range for the given set of numbers 3, 7, 9, 8, 4, 6, 2, 7, 9, 10, 6.

2. Find the range of the weight of textbooks in a student's locker: 12, 14, 16, 18, 18, 20.

Let's put it all together....

Mr. Falci and some other teachers played in an 18-hole golf tournament. The scores are listed below.

82, 89, 87, 86, 88, 83, 120, 89

mean_____ median_____ mode_____ range_____

True or False?

1. mean > median _____ 2. median < mode _____

3. mode = range _____ 4. mode > mean _____

Measure of Central Tendency

Which measure of central tendency best represents the golf score for the teachers? Why?

_____

_____

_____

Mean, Median, Mode and Range

Mean – Add up #'s ÷ how many numbers there are

Examples:

1. Matthew's test grades are 80, 92, 85, 91, and 88. Find the mean of his grades.

$$\frac{80+92+85+91+88}{5} = \frac{436}{5} = \boxed{87.2}$$

2. To qualify for a donut eating competition, Sally must average eating 15 donuts in 10 minutes. In her practice trials Sally ate 16, 12, 15, 15, 11, and 13. What is the mean of donuts Sally eats? Can she enter the competition?

$$\frac{16+12+15+15+11+13}{6} = \frac{82}{6} = \boxed{13.7 \quad \text{No she can't enter the competition}}$$

Median – (1) Least to Greatest

(2) Middle # (If 2 then find mean of both)

Examples:

1. Find the median for the given set of numbers 3, 7, 9, 8, 4, 6, 2, 7, 9, 10, 6.

2, 3, 4, 6, 6, (7), 7, 8, 9, 9, 10

What is the median of the data set?

2, −4, 1, 7, −3, 0, −2, 6, 3, −1, −5, 4

−5, −4, −3, −2, −1, 0, 1, 2, 3, 4, 6, 7

$\frac{0+1}{2}$

Median = 0.5

Mode – # that appears most often

Examples:

1. Find the mode for the given set of numbers 3, 7, 9, 8, 4, 6, 2, 7, 9, 10, 6.

Mode: 6, 7, and 9

2. Find the mode weight of the textbooks in a student's locker: 12, 14, 16, 18, 18, 20.

Mode: 18

Range - biggest # − smallest #

Examples:

1. Find the range for the given set of numbers 3, 7, 9, 8, 4, 6, 2, 7, 9, 10, 6.

10 - 2 = 8

2. Find the range of the weight of textbooks in a student's locker: 12, 14, 16, 18, 18, 20.

20 - 12 = 8

Let's put it all together....

Mr. Falci and some other teachers played in an 18-hole golf tournament. The scores are listed below.

~~82~~, ~~89~~, ~~87~~, ~~86~~, ~~88~~, ~~83~~, 120, ~~89~~

82, 83, 86, 87, 88, 89, 89, 120

724 / 8 =

↑

mean 90.5 median 87.5 mode 89 range 38

True or False?

1. mean > median True (90.5 > 87.5)
2. median < mode True (87.5 < 89)
3. mode = range False
4. mode > mean False (89 > 90.5)

Measure of Central Tendency

Which measure of central tendency best represents the golf score for the teachers? Why?

The median because it lies in the middle of the data values and is not affected by the stray value