

# HELP TIP 1

## Tip # 1

### Median:

1. Put numbers in order from least to greatest
2. Mark off high and low values until you reach the middle
3. IF there are 2 middle numbers, add them together and divide by 2

### Mean:

1. Add all the values together in the dataset
2. Divide by how many numbers are in the set

### Mode:

Find the number that appears the most  
\*there could be more than one mode OR no mode at all

### Range:

Subtract the lowest number from the highest number

## Example:

3, 5, 6, 3, 7, 2, 4, 8, 8, 9, 10, 3, 2, 1, 10, 5

### Median:

Order from least to greatest

1, 2, 2, 3, 3, 3, 4, 5, 5, 6, 7, 8, 8, 9, 10, 10

Mark off high and low values

~~1~~ ~~2~~ ~~2~~ ~~3~~ ~~3~~ ~~3~~ ~~4~~ 5, 5 ~~6~~ ~~7~~ ~~8~~ ~~8~~ ~~9~~ ~~10~~ ~~10~~

Add together and divide by 2

$$5 + 5 = 10 \div 2 = 5$$

Median: 5

### Mode:

Number that appears the most

1, 2, 2, 3, 3, 3, 4, 5, 5, 6, 7, 8, 8, 9, 10, 10

Mode: 3

### Mean:

Add dataset together

$$1 + 2 + 2 + 3 + 3 + 3 + 4 + 5 + 5 + 6 + 7 + 8 + 8 + 9 + 10 + 10 = 86$$

Divide by how many numbers are in the set

$$86 \div 16 = 5.4 \text{ (rounded to the nearest tenth)}$$

Mean: 5.4

### Range:

Subtract the lowest number from the highest

$$10 - 1 = 9$$

Range: 9

Outlier: a value that is much higher or much lower than the other values in a set of data

1, 2, 2, 3, 3, 3, 4, 5, 5, 6, 7, 8, 8, 9, 10, 10, 47 → 47 would be an outlier, it is much higher than the set of data

# HELP TIPS 2-4

## Tip # 2

If you only get one answer, it is *not statistical*.

- How old is your brother?
- How many siblings does your best friend have?
- Who is your favorite singer?

If you get a variety of answers it *is statistical*.

- How old are the students in your school?
- What are the favorite colors of each person on the soccer team?
- What is my family's favorite genre of music?

## Tip # 3

Understanding that a ratio is a comparison between two different things.



There are 6 faces and 3 hearts. For every 6 faces there are 3 heart. 6:3



There are 4 moons and 3 suns. For every 4 moons there are 3 suns. The ratio would be 4:3

## Tip # 4

Using ratio reasoning to solve problems.

i.e

We paid \$40 for 8 hamburgers, which is a rate of \$\_\_\_ per hamburger.

$$\frac{\text{hamburgers}}{\text{cost}} = \frac{\text{hamburgers}}{\text{cost}}$$

$$\frac{8}{40} = \frac{1}{x} \quad \text{Multiply diagonals and set equal to each other}$$

$$8(x) = 40(1) \rightarrow 8x = 40 \quad \text{Solve for x by dividing } 40 \div 8$$

$$x = 40 \div 8 \rightarrow x = 5$$

If 8 hamburgers cost \$40, then 1 hamburger is \$5.