

Mean, Median, Mode Tutorial & Practice

How to calculate the mean:

1. Add up all the values
2. Divide by the # of values

Example:

Set of values= {1, 5, 3, 4, 3, 6}

$$\text{Mean} = (1+5+3+4+3+6)/6 = \mathbf{3.667}$$

How to calculate the median:

1. Order the numbers
2. If there are an odd number of values, the median is the middle
 - a. How to calculate the middle value for odd: Take the total number of values (N) and divide by two.
3. If there are an even number of values, the median is the exact middle of those two numbers (the mean of the middle two numbers)
 - a. How to calculate the middle value for even: Take the total number of values (N) and divide by two...it will be this value (counting from the beginning) and the following number

Example

Set of values= {1, 5, 3, 4, 3, 6}

Put in order= {1, 3, 3, 4, 5, 6}

of values = 6 (so we follow the instructions for even # of values)

The middle two numbers are 3 and 4

The mean of 3 and 4 = $(3+4)/2 = \mathbf{3.5}$

How to calculate the mode:

1. Look for the value that repeats the most in the set of values. (Shows up the most often).
This value is the mode.
2. NOTE: This is NOT the highest value
3. NOTE: There might not always be a mode AND you can have more than one mode.

Example

Set of values= {1, 5, 3, 4, 3, 6}

- 1, repeats once
- 3, repeats twice
- 4, repeats once
- 5, repeats once
- 6, repeats once

3 is the mode because it repeats in the set of values more than any other number!

PRACTICE: Calculate mean, median, and mode for the following sets of values:

1. { 5, 10, 15, 20, 15}
2. {-2, -1, 0, -1, 2}
3. {57, 32, 65, 98, 23, 45, 32, 67, 99}
4. {1.2, 5.7, 9.9, 6.3, 2.5, 1.2, 8.2, 7.4, 6.5, 5.7}

(Answers on next page)

ANSWERS

1. { 5, 10, 15, 20, 15}
 - a. Mean= 13
 - b. Median= 15
 - c. Mode= 15
2. {-2, -1, 0, -1, 2}
 - a. Mean= -0.4
 - b. Median= -1
 - c. Mode= -1
3. {57, 32, 65, 98, 23, 45, 32, 67, 99}
 - a. Mean= 57.56
 - b. Median= 57
 - c. Mode= 32
4. {1.2, 5.7, 9.9, 6.3, 2.5, 1.2, 8.2, 7.4, 6.5, 5.7}
 - a. Mean= 5.46
 - b. Median= 6
 - c. Mode= 1.2, 5.7