

# MTH 213: Statistics

## Mean, Median, Mode, & Range



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MEAN (Average)		
Definition: Add up a list of values in a set of data & divide by the number of values you have		
Example: 6, 4, 4, 3, 8		
STEP 1	Put values in order from least to greatest.	3, 4, 4, 6, 8
STEP 2	ADD up all the numbers	$3+4+4+6+8=25$
STEP 3	DIVIDE by the number of values you have	$25 \div 5 = 5$
Answer		The mean is 5

MEDIAN (Middle)		
Definition: The middle value in a set of data when the values are written in order. If there are even number of values, find the mean of the two values.		
<b>Even example: 6, 4, 4, 3, 8</b>		
STEP 1	Put values in order from least to greatest.	3, 4, 4, 6, 8
STEP 2	Find the middle value. * If there is an odd number of values	3, 4, <u>4</u> , 6, 8
Answer		The median is 4
<b>Odd example: 6, 4, 4, 3, 8, 5</b>		
STEP 1	Put values in order from least to greatest.	3, 4, 4, 6, 8
STEP 2	Find the middle value. *If even number of values then find the mean of the values.	3, 4, <u>4, 5</u> , 6, 8
STEP 3	Find the mean of the two middle numbers	$4+5=9$ $9 \div 2 = 4.5$
Answer		The median is 4.5

MODE (Most)		
Definition: The value in a set of data that is repeated the most often. In some cases the can be more than one mode, one mode, or none.		
Example: 6, 4, 4, 3, 8, 5, 4, 1		
STEP 1	Put values in order from least to greatest.	1, 3, 4, 4, 4, 5, 6, 8
STEP 2	Find the number that occurs the most	1, 3, <u>4, 4, 4</u> , 5, 6, 8
Answer		The mode is 4.

RANGE		
Definition: The largest number minus the smallest number		
Example: 6, 4, 4, 3, 8, 5, 4, 1		
STEP 1	Put values in order from least to greatest.	1, 3, 4, 4, 4, 5, 6, 8
STEP 2	Find the largest number and subtract the smallest number	$8-1=7$
Answer		The range is 7