MasterMath

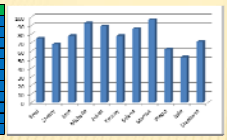
STATISTICS

Finding Measures of Central Tendency

AVERAGE

In mathematics, an average, or *central tendency* of a data set is a measure of the "middle" value of the data set. Average is a *Statistic*.

Student	Score
Fred	75
Sherry	68
Jose	78
Michelle	93
Julian	89
Keshav	78
Selena	86
Marcus	97
Pietro	62
Julie	53
Stephano	71



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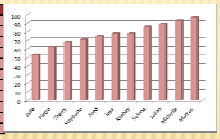

Mean:
Sum of the data set, divided by the number of data values.

1, 2, 2, 3, 4

1 + 2 + 2 + 3 + 4 = 12
12 ÷ 5 = 2.4

53 + 62 + 68 + 71 + 75 + 78 + 78 + 86 + 89 + 93 + 97 = 850

850 ÷ 11 = 77.3

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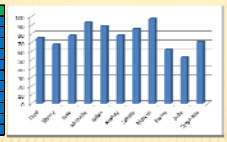

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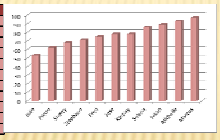

Median:
Order the data. For a set with an odd number of values, the **median** is the middle value. For a set with an even number of values, the **median** is the mean of the two middle values.

1, 2, 2, 3, 4 Median: 2

2, 2, 3, 4 Median: 2.5

Median: 78

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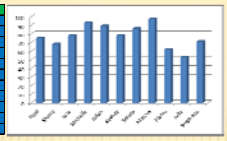

Mode:

The **mode** of a data set is the value or values that occur most often. Data can have one mode, more than one mode, or no mode. When all values occur only once, there is no mode.

1, 2, 2, 3, 4 Mode: 2

1, 2, 3, 4 Mode: none

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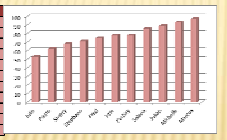

Mode: 78

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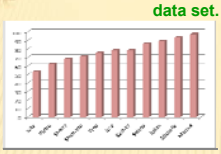
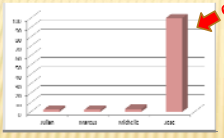


Mean: 77.3
Median: 78
Mode: 78

Student	Score
Julie	1
Marcus	2
Michelle	3
Jose	100



Mean: 26.8
Median: 2.5
Mode: 2

Finding Measures of Central Tendenc

RANGE

The *range* of a data set is the difference between the greatest value and the least value. The range describes how spread out the data are.

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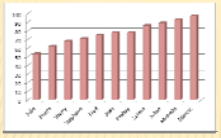


Greatest Value: 97
Least Value: -53
Range: 44

Finding Measures of Central Tendenc

You try it!

Find the mean, median, mode and range for this data set:
4, 2, 8, 6

2, 4, 6, 8

Mean: 2 + 4 + 6 + 8 = 20; 20 ÷ 4 = 5

Median: (4 + 6) ÷ 2 = 5

Mode: none

Range: 8 – 2 = 6

Finding Measures of Central Tendenc

You try it!

Find the mean, median, mode and range:
12, 18, 8, 20

Finding Measures of Central Tendenc

You try it!

Find the mean, median, mode and range:
12, 18, 8, 20

8, 12, 18, 20

Mean: 8 + 12 + 18 + 20 = 58; 58 ÷ 4 = 14.5

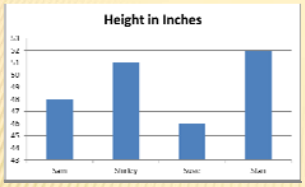
Median: (12 + 18) ÷ 2 = 15

Mode: none

Range: 20 – 8 = 12

Finding Measures of Central Tendenc

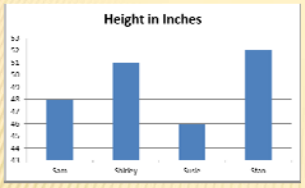
You try it!



What is the mean height?

Finding Measures of Central Tendenc

You try it!



What is the mean height?

48 + 51 + 46 + 52 = 197
197 ÷ 4 = 49.25”

Finding Measures of Central Tendenc

You try it!

Now, try it on your own. Go to
www.MasterMath.info
download
Mean, Median, Mode and Range
from the Worksheets Page, and test your skill.

Finding Measures of Central Tendenc