Name: _____ Date: _____

Get Ready

Measures of Central Tendency

Mean: what most people call the average. Mean = $\frac{\text{sum of items}}{\text{number of items}}$

- example: In the data set 1, 3, 4, 1, 5, 2, 4, 4, the mean is 3:

$$\frac{1+1+2+3+4+4+4+5}{8} = \frac{24}{8} = 3$$

lowest to highest

Median: the middle number in a set of data that has been arranged in ascending order

- example: 43, 43, 45, 46, 47 has an odd number of data values.
  The middle number is 45, so 45 is the median.
- example: 1, 1, 2, 3, 4, 4, 4, 5 has an even number of data values. The median is halfway between the two middle numbers, 3 and 4. Median = $\frac{3+4}{2} = 3.5$

Mode: the number that appears the most often in a set of data.

- example: In 1, 1, 2, 3, 4, 4, 4, 5, the mode is 4.
- A data set can have more than 1 mode.
- example: In 1, 3, 3, 6, 6, 10, the modes are 3 and 6.

1. Find the mean, median, and mode.

a) 1, 3, 6, 2, 8, 5, 15, 15, 8

Mean = $\frac{\text{sum of values}}{\text{number of values}}$

$= \frac{1+3+6+2+8+5+15+15+8}{\square}$

$= \frac{\square}{\square}$

= _____

Ascending order: _____

Median = _____

Mode = _____

b) 4.3, 4.5, 4.2, 5

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Calculating the Range

The **range** tells you about the spread of the data.
- Range = highest value – lowest value
- example: 1, 1, 2, 3, 4, 4, 4, 5
  Highest value = 5; lowest value = 1. The range is 5 – 1 = 4.

2. Find the range.

a) 9, 8, 8, 3, 7

Range = highest value – lowest value

= _____ – _____

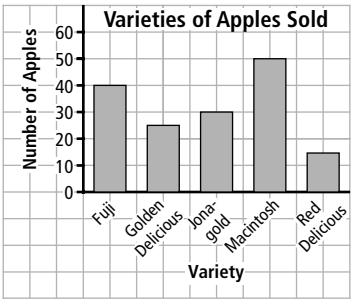
= _____

b) 16, 11, 7, 29, 31, 24, 18, 18, 18

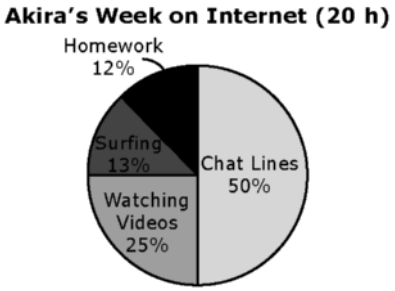
Representing Data

You can show data using graphs.

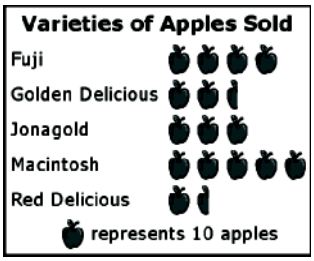
Bar graphs are best for comparing data across different groups.



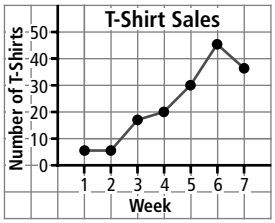
Circle graphs are best for comparing parts of a whole using percents.



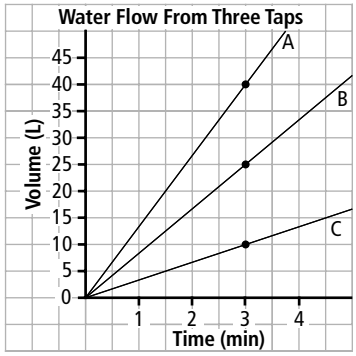
Pictographs are best for comparing data that can be easily counted.



Line graphs are best for showing changes in data over time.



3. Truong recorded the water flow from 3 taps on a line graph.



a) Which tap flows the fastest? _____

b) What is the approximate water flow in 2 min from Tap B? _____