

## 4-1 Mean, Median, and Mode

Mean, median and mode are three kinds of averages. They can be the same answer for a particular data set or they can be different. When you read an article in a magazine and it says "the average...", it is helpful to know what kind of average is being talked about.

Example: A family has children aged 3, 4, 5, 3, 6. find the mean, median and mode.

**Mode:** the number that appears the most often.

3 appears twice the other numbers only once. 3 is the mode. A list can have more than one mode or no mode at all.

**Median:** The number in the middle of the list.

First, put the numbers in order.                    3, 3, 4, 5, 6

The number in the middle is 4. 4 is the median.

If a list has an even number of elements, the median is the mean of the middle two numbers.

**Mean:** Mean is the kind of average you have used before.

1) Add the numbers.                     $3 + 3 + 4 + 5 + 6 = 21$

2) Divide by how many numbers were in the list. There are 5 numbers in the list.

$21 \div 5 = 4.2$

Practice:

a) Find the mean, median, and mode of the following set: 7, 5, 4, 6, 3, 8, 2, 5, 4, 6, 4, 7, 6.

b) Find the mean, median, and mode of the following: 2, 2, 3, 3, 4.

c) Find the mean, median, and mode of the following: 2.34, 12.3, 3.4, 4, 2.1, 5.32.

d) Find the mean, median, and mode of the following:  $\frac{3}{4}$ ,  $2, 1\frac{1}{2}$ ,  $\frac{1}{2}$ , 5.

e) Find the mean, median, and mode of the following:  $9\frac{1}{4}$ , 3, 2, 5,  $3, 1\frac{2}{3}$ ,  $1\frac{1}{2}$ , 5.

f) Jack has taken 4 of 5 GED tests with the following scores: Math 480, Literature 430, Science 460, Social studies 400. He needs a mean of 450 to pass. What score will he need to get on his last test to have a mean of 450? What is the median and mode of the scores?

g) A class has 15 students. The mean age of the class is 29 years. The mode is 21 with 3 students at that age. Two students are 18. Others are aged 16, 19, 27, 31, 35, 37, 40, 40, and 54. What is the age of the last student? What is the median?