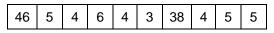Name_____

Reteaching Page
6.3 Additional Data and Outliers

An **outlier** is a value that is much greater or much less than the other values in a data set. Often there are reasons for an outlier and their data should not be used to compute a data set's average. For example;

> We polled the ages of 10 people that went to see the movie **Barney Loves You**. The results of the poll are shown below.

46	5	4	6	4	3	38	4	5	5

Why in the world would old people go to see Barney the Dinosaur???
Their data is called an outlier – because it is much different than the rest of the data. They aren't really there to see the movie, they went to take care of the audience! Let's see how their data affects the averages.

With All of the Data	Without the Outliers
_____ = Mean	_____ = Mean
_____ = Median	_____ = Median
_____ = Mode	_____ = Mode
_____ = Range	_____ = Range

As you can see **range and mean** are the data pieces that are greatly changed by the outliers.
Does it seem reasonable that the average age of **Barney Loves You** viewers is 12 years old?
In this case – the median age is the data that best describes the data set. The average viewer is 5 years old and you can infer that Barney the Dinosaur attracts an audience around that age.

Consequences of incorrect averages – If you were an advertiser, think about the products would you try to sell to 12 year olds. Would your products sell well to the actual audience of **Barney Loves You**?

Products marketed to preteens	Sell well to this audience?
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____