Math 9 – Unit 1: Real Numbers Name: _____

Lesson #5: Statistics Date: _____

Statistics is a branch of Mathematics. It deals with collecting data, organizing, and analyzing it, then finally interpreting, and presenting it. In this lesson, we will look at analyzing and presenting data.

There are many ways to analyze data, but we will focus our attention on the mean, median, and mode.

The mean is the average. You calculate it by adding up all the numbers and dividing by total number of numbers.

The median is the middle of the numbers
→ order the numbers from lowest to highest, then it is in the middle.

The mode is the number that comes up the most.
→ you can have more than one mode or no mode.

Example 1: Test scores in a Math class were as follows: 78, 67, 85, 81, 90, 74, 95, 85, 80, 92. Calculate the mean, median, and mode.

Mean: $\frac{78+67+85+81+90+74+95+85+80+92}{10} = \frac{827}{10} = 82.7$

Median: 67, 74, 78, 80, 81, 85, 85, 90, 92, 95

$\frac{81+85}{2} = \frac{166}{2} = 83$

* If you have an even size, the median is the average of the 2 middle numbers

Mode: 85

Example 2: Hits at a week's worth of baseball games were recorded as follows: 13, 16, 6, 10, 7, 8, 9. Calculate the mean, median and mode.

Mean: $\frac{13+16+6+10+7+8+9}{7} = \frac{69}{7} = 9.9 \approx 10$ (approximately)

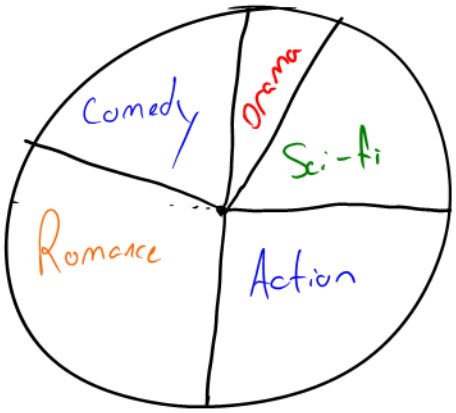
Median: 6, 7, 8, 9, 10, 13, 16

Mode: no mode.

Pie Charts are a quick and useful way to present data. The first step, after organizing the data, is to calculate the percents for each category.

Example 3: Twenty people were asked to indicate their favourite movie genre. The results are in the table below. Calculate the percentages of each category, then create a pie chart.

Favourite Movie Genre		
Comedy	4	4/20 = 20%
Romance	6	30%
Drama	1	5%
Sci-fi	4	20%
Action	5	25%



What Meat Do You Like?

Beef	10	10/24 = 42%
Fish	4	4/24 = 17%
Pork	3	3/24 = 13%
Chicken	7	7/24 = 29%

24 total