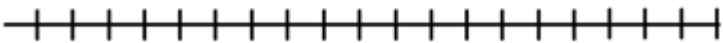Name: _____   Date: _____

Use the following to review for you test. Work the Practice Problems on a separate sheet of paper.

What you need to know & be able to do	Things to remember	Problem	Problem
Central Tendency	• Mean • Median • Mode	**1.** 36, 39, 58, 42, 106, 39, 48, 45	**2.** 50, 55, 60, 58, 62, 57, 68, 51, 63
Measures of Spread	• Q1 • Q3 • IQR • Minimum • Maximum • Range • MAD	**3.** (Use the same #s from 1)	**4.** (Use the same #s from 2)
Box-and-Whisker Plot and Outliers	• First dot: Min • First Line: Q1 • Middle Line: Median • Third Line: Q3 • Last dot: Max • Outlier: Q1 – 1.5(IQR) Q3 + 1.5(IQR)	**5.** Using the data from #1 & 3, construct a box and whisker plot. +-+ **6.** Are there any outliers? Show your work!	
Correlation vs. Causation	• Positive: Both items are increasing/decreasing • Negative: one item increases as the other decreases • No Correlation: No relationship • Causation: One item causes the other.	**7.** Practicing Free Throws vs. Free Throw Percentage **9.** Weight vs. Amount of Exercise	**8.** Temperature vs. Amount of layers of clothing **10.** Number of Followers on Twitter vs. Number of Friends on Facebook

| Linear Regression | • y = ax + b
• r = correlation coefficient (if close to 0 bad fit; if close to 1 or -1 good fit.) | **11.** Determine **the line of best fit**. Is this model a good fit for the data? |

Absences	4	5	3	8	5	2
Grade on the Test	76	55	85	22	64	98

A.   What is the line of best fit for this data?

B.   What is the correlation coefficient for the data?

C.   What does the y – intercept of the line of best fit mean in context of the problem?

D.   What does the slope mean in context of the problem?

E.   What grade will you make if you have 10 absences?

F.   Using your equation how many days was a student absent if they made an 81 on the test?

| **Probability** | • Joint Probability: Individual Cell/Table Total
• Marginal Probability: Row or Column Total/ Table Total
• Conditional Probability: Individual Cell/Row or Column Total | Complete the table to answer the following questions. |

	Football	Basketball	Soccer	
Males	48	35	17	
Females	22	38	40	

12. What is the probability that a randomly chosen person is a female and likes soccer?

13. What is the probability that someone likes basketball?

14. Given that a person likes football, what is the probability they are male?