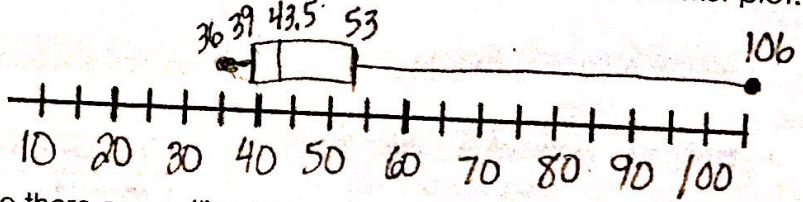
Name: Key Date: _____

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
Identify the measures of central tendency.	• Mean • Median • Mode	1. 36, 39, 58, 42, 106, 39, 48, 45 Mean 51.63 Median 43.5 Mode 39	2. 50, 55, 60, 58, 62, 57, 68, 51, 63 Mean 58.22 Median 58 Mode none
Identify the measures of spread.	• Q1 • Q3 • IQR • Minimum • Maximum • Range • MAD	3. (Use the same #s from 1) $Q_1 = 39$ $Q_3 = 53$ IQR = 14 Min = 36 Max = 106 Range = 70 MAD = 15.19	4. (Use the same #s from 2) $Q_1 = 53$ $Q_3 = 62.5$ IQR = 9.5 Min = 50 Max = 68 Range = 18 MAD = 4.47
Construct a box-and-whisker plot.	• 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! 53 + 1.5(14) = 74 → yes, 106 is an outlier. 39 − 1.5(14) = 18 → no	
etermine if the uation has a ositive, negative, no correlation d if there is usation.	• 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 Positive Correlation No Causation	8. Colors of the Sky vs. Time of Day No Correlation No Causation
		9. Weight vs. Amount of Exercise Negative Correlation Causation	10. Number of Followers on Twitter vs. Number of Friends on Facebook No Correlation No Causation

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ind the line of best t.

- $y = ax + b$
- 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?

Price	4.00	5.50	3.50	8.00	5.50	7.00
# of Sandwiches	68	55	85	22	64	28

$y = -13.73x + 130.48$ $r = -0.96$, yes a good fit

ind the exponential egression model.

- $y = a(b)^x$
- r = correlation coefficient (if close to 0 bad fit; if close to 1 or -1 then good fit.)

12. Determine the exponential regression model. Is this model a good fit for the data?

Year	0	2	4	7
Revenue	3	4	11	25

$y = 2.68(1.38)^x$ $r = 0.98$ yes, a good fit

Construct a probability table.

- 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	100
Females	22	38	40	100
	70	73	57	200

13. What is the probability that a randomly chosen female likes soccer? $40/100 = 40\%$

14. What is the probability that someone likes basketball? $73/200 = 37\%$

15. Given that a person likes football, what is the probability they are male? $48/70 = 69\%$

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