Algebra 1 ~ U6 Day 6 Unit 6 Test Review Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| **Use the following to review for your test. Show your work for the problems on a separate sheet of paper as you need too.** |
| **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
 | 1. 50, 55, 60, 58, 62, 57, 68, 51, 63
 |
| Identify the measures of spread (variability/ distribution). | * Q1
* Q3
* IQR
* Minimum
* Maximum
* Range
 | 1. (Use the same #s from 1)
 | 1. (Use the same #s from 2)
 |
| Construct a box-and-whisker plot.  | * First dot: Min
* First Line: Q1
* Middle Line: Median
* Third Line: Q3
* Last dot: Max
 | 1. Using the data from #1 & 2, construct a box and whisker plot.

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 1. What percent of data lies between the following:

 **a.** min & Q1 **b.** Q1 & Q3  **c.** median & Q3 **d.** min & max |
| Determine if the situation has positive, negative, or no correlation and if there is 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.
 | 1. Practicing Free Throws vs. Free Throw Percentage
 | 1. Colors of the Sky vs. Time of Day
 |
| 1. Weight vs. Amount of Exercise
 | 1. Number of Followers on Twitter vs. Number of Friends on Facebook
 |
| Find the line of best fit. | * y = ax + b
* r = correlation coefficient (if close to 0 bad fit; if close to 1 or -1 good fit.)
 | 1. Determine the line of best fit, correlation coefficient, and type of correlation. Is this a good line of fit for the data?

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

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| Construct a two-way frequency 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.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Math | Social Studies | PE | Total |
| 9th Graders | 50 |  | 40 |  |
| 10th Graders |  | 20 | 50 |  |
| Total | 72 | 38 |  | 200 |

1. How many 9th graders like Social Studies?
2. What percentage of 10th graders like PE?
3. Given that a student likes math, what is the probability they are in the freshman class?
 |
| Correlation Coefficient | * r = correlation coefficient (if close to 0 bad fit; if close to 1 or -1 good fit.)
 | **16.** According to the given correlation coefficient, describe the linear association of two variables as positive, negative, strong, weak, or no correlation (use at least two words).  a. r = -0.992 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ b. r = 0.289 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   c. r = 0.865 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Shape of distribution | * Normal (bell curve)
* Bimodal (2 peaks)
* Skewed left (tail on left)
* Skewed right (tail on right)
 | **17.** Draw an example of each distribution shape.  |