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