

C2.0 Algebra 1 Unit 3 – Descriptive Statistics

Topic	Overview
Topic 1: Analyzing Data Representations	<p>This unit builds upon students' prior experiences with center, variability, scatterplots, and linear trends in data, by providing more formal means of assessing how a model fits data. Students use regression techniques to describe approximately linear relationships between quantities and look at residuals to analyze the goodness of fit.</p> <p><u>Concepts:</u></p> <ul style="list-style-type: none"> • Calculate measures of central tendency and determine which measure of central tendency best represents the average of the data. • Represent data in a box plot and to discuss shape, center, and spread in the context of the problem. • Recognize extreme data points (outliers) and to explain their impact on the data. • Analyze data represented in different formats (histograms and box plots). • Compare the shape, center, and spread of two or more sets of data. • Calculate the deviations from the mean for two symmetrical data sets that have the same means. • Determine that a larger deviation from the mean signifies the data distribution has a greater spread and vice-versa. • Calculate the standard deviation for a set of data with and without technology. • Interpret the standard deviation as a typical distance from the mean. • Derive the formula for computing the standard deviation. • Compare the relative variability of distributions using standard deviations. • Create and interpret two-way frequency tables and charts. • Interpret data and use it to effectively communicate information being presented based on the context. • Interpret different types of relative frequency tables. • Analyze data based on the relative frequency of a row, column, or whole table. • Understand and communicate the benefits of representing data in different formats. • Describe the difference between correlation and causation given graphs and tables. • Use technology to determine the linear regression equation of given data and make connections between the slope of the equation and the correlation of the data. • Use technology to determine the correlation coefficient given a table. • Explore the relationship between scatter plots and correlation coefficients. • Create scatter plots from a given set of data. • Analyze data to determine the correlation coefficient and utilize lines of best fit; those estimated by hand and those calculated using technology.