

Math Test Written Component

Linear Models are very helpful when looking at a set of data, as they provide a form of predicting future data in a set. When a set of data is graphed, one can figure out whether or not it is linear, and its correlation coefficient. If the correlation coefficient is not one or negative one, then one can fit a line that fits most of the points in order to calculate an equation. One would then take two plot points from the line in order to find the slope, which is one of the components of a linear equation. A graph would also help one calculate what the Y-intercept is, which is the other component of a linear equation. Once one has calculated a linear equation, they can easily predict future data for the set of data.

One example of a set of data is the relationship between height and foot size. The relationship between height and foot size is most likely somewhat correlated because they both involve growing, however they are not perfectly correlated, as there are always differences between different people. If one were to collect data about height and foot size, they could graph the data and fit a line in order to calculate an equation. They could then predict what the foot size would be for a certain height or what the height would be for a certain foot size.

It is important to assess the accuracy of a linear model because one does not want to calculate false information from their predictions. It is also very easy to falsely analyze a set of data if it seems as though it is not linear even though it is. There might be a set of data with points spread all throughout the graph, and it could still be moving in the same direction, therefore making it a linear set.

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