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**ASSIGNMENT ANSWERS**

1. Hypothesis testing is an act in statistics whereby an analyst tests an assumption regarding a population parameter. It is used to assess the plausibility of a hypothesis by using sample data.
2. The Classical Approach to hypothesis testing is to compare a test statistic and a critical value. It is best used for distributions which give areas and require you to look up the critical value (like the Student's t distribution) rather than distributions which have you look up a test statistic to find an area (like the normal distribution).

The Classical Approach also has three different decision rules, depending on whether it is a left tail, right tail, or two tail test.

One problem with the Classical Approach is that if a different level of significance is desired, a different critical value must be read from the table.

On the other hand, the P-Value Approach, short for Probability Value, approaches hypothesis testing from a different manner. Instead of comparing z-scores or t-scores as in the classical approach, you're comparing probabilities, or areas. The level of significance (alpha) is the area in the critical region. That is, the area in the tails to the right or left of the critical values. The p-value is the area to the right or left of the test statistic. If it is a two tail test, then look up the probability in one tail and double it. If the test statistic is in the critical region, then the p-value will be less than the level of significance. It does not matter whether it is a left tail, right tail, or two tail test. This rule always holds.

1. Hypothesis testing assists researchers in making wise decisions which usually depends on the statistical decision.