Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Due:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Activity 10-1**

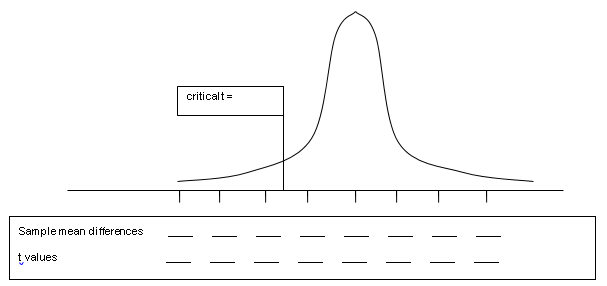
1. \_\_\_\_\_ Independence

\_\_\_\_\_ Appropriate measurement of the IV and DV

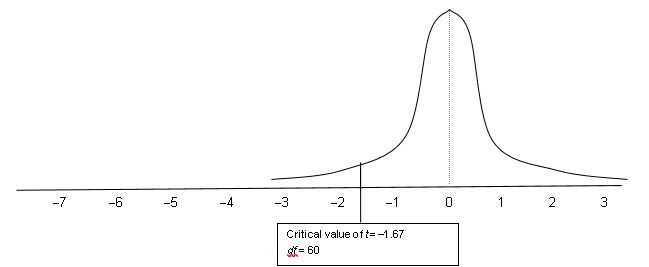
\_\_\_\_\_ Normality

\_\_\_\_\_ Homogeneity of variance

1. \_\_\_\_\_
2. \_\_\_\_\_
3. Null (H0) = \_\_\_\_\_; Research (H1) = \_\_\_\_\_
4. Null (H0) = \_\_\_\_\_; Research (H1) = \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
8. \_\_\_\_\_



1. \_\_\_\_\_
3. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_



1. Make sure the figure your drew is correct.
2. Type I error [rejecting a true null]: Area \_\_\_\_\_\_\_\_\_\_.

Type II error [failing to a false null]: Area \_\_\_\_\_\_\_\_\_\_.

Statistical Power [rejecting a false null]: Area \_\_\_\_\_\_\_\_\_\_.

Failing to reject a true null: Area \_\_\_\_\_\_\_\_\_\_.

1. \_\_\_\_\_
2. \_\_\_\_\_

Type I error: Increase Decrease Stay the same

Type II error: Increase Decrease Stay the same

Statistical power: Increase Decrease Stay the same



Type I error: Estimate only Precise value is known

Type II error: Estimate only Precise value is known

Statistical power: Estimate only Precise value is known

1. \_\_\_\_\_

* The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ allows us to predict the center, shape, and spread of the distribution of sample means (or the distribution of sample mean differences) if the null is true.
  + State the theorem below.
* The \_\_\_\_\_\_\_\_ hypothesis precisely locates the center of the null distribution of sample means (or the null distribution of sample mean differences). This location is at a *z* value of \_\_\_\_\_\_\_ or at *t* value of \_\_\_\_\_\_\_\_.
* The center of the \_\_\_\_\_\_\_\_\_\_\_\_\_ hypothesis distribution of sample means (or mean differences) is estimated from the sample mean (or sample mean difference) and cannot be known before data are collected.
* The probability of a \_**\_\_\_\_\_\_\_\_\_\_\_\_\_**\_ is set by researchers when they set the α value.
* By building the null and research hypotheses distributions of sample means (or sample mean differences), we can quantify the probability of failing to reject a false null (i.e., \_\_\_\_\_ **\_\_\_\_\_\_\_**\_) as well as the likelihood of rejecting a false null (i.e. \_**\_\_\_\_\_\_\_\_\_\_\_**\_).
* The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of *t* or *z* “cuts” likely values if the null is true from unlikely values if the null is true; if a statistic (e.g., *z* value, *t* value) is more extreme than this value, the null hypothesis is unlikely to be true.
* If the null is rejected, the \_\_\_\_\_\_\_\_\_\_ hypothesis is considered likely to be true.
* After a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is performed, researchers know whether or not the null is likely to be true. They do not know how effective the IV was at impacting the DV. To quantify the impact of the IV on the DV, researchers must compute a/an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. \_\_\_\_\_
2. SEM for Study A =

SEM for Study B =

Your choice = \_\_\_\_\_\_\_

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_