Exam Week 5

Quiz, 5 questions

5/5 points (100%)

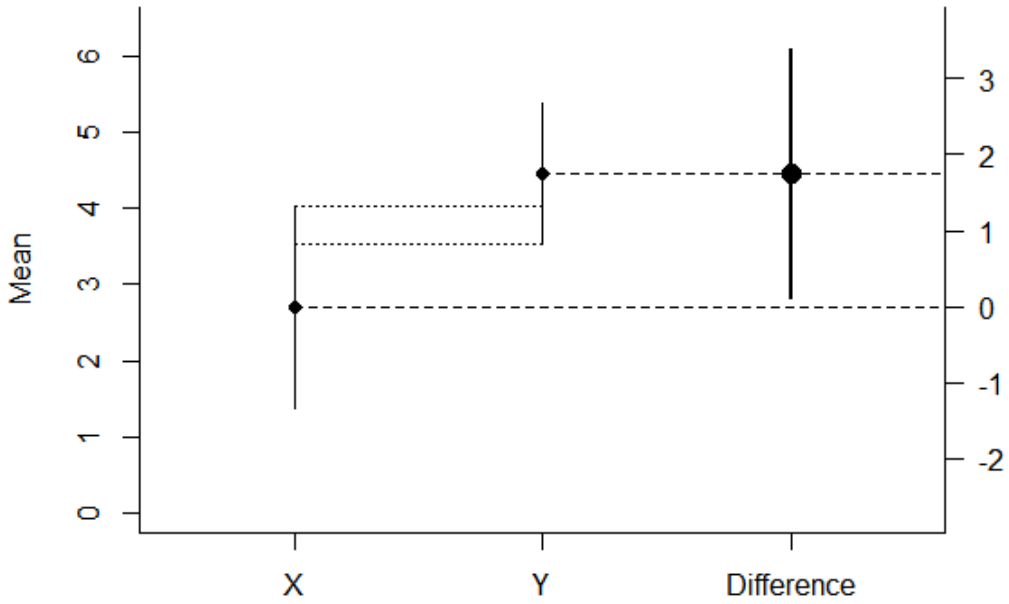
✔ Congratulations! You passed!

Next Item

✔ 1 / 1 points

1.

In the picture below, we see the 95% CI around two means from independent groups, and the 95% mean around the mean difference between the two groups. What can we conclude based on the CI?



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1 / 1 points

2.

A prediction interval is always _____ than a confidence interval. A prediction interval predicts where the next _____ will fall, while a confidence interval predicts where the next _____ will fall.

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1 / 1 points

3.

One-sided tests are more efficient than two-sided tests. Open G*power. When you plan to do an independent samples t-test to compare two means, and perform an a-priori power analysis based on an expected effect size of d = 0.35, using an alpha of 0.05, planning for a desired power of 0.9, and planning to allocate the same number of participants in each group, what is the difference in the total sample size required when using a one-sided test compared to a two-sided test?

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1 / 1 points

4.

You perform a power analysis for an independent *t*-test, where you want 80% power, using an alpha of 0.05 for a two-sided test, and equal allocation of participants across both conditions. For an effect observed in the literature, Cohen's d = 0.42, and Hedges' g is 0.39. What is best estimate of the total sample size you need?

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1 / 1 points

5.

Power analysis is a good starting point to determine the sample size for a replication study, but it should not be the endpoint. Why can you not just assume that you have a well-powered study when you perform an a-priori power analysis based on the effect size reported in a published study?
