

# Graded Final Exam

Quiz, 21 questions

20/21 points (95%)

✓ **Congratulations! You passed!**

Next Item



1 / 1  
points

1.

How are the three paths to statistical inference (frequentist, likelihood, bayesian) related to each other?

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1 / 1  
points

2.

Two researchers are investigating if people can see in the future. Person A believes there is no effect, which would mean that p-values are distributed as a \_\_\_\_\_. B finds a test statistic in the very far end of the distribution, which means that \_\_\_\_\_.

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1 / 1  
points

3.

The probability of finding a significant result when there is no true effect is called \_\_\_\_\_. The probability of finding a significant result when there is a true effect, is called \_\_\_\_\_.

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1 / 1  
points

4.

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The likelihood ratio of two hypotheses gives information about \_\_\_\_\_, but not about \_\_\_\_\_.

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1 / 1  
points

5.

You used a Bayesian method to estimate a population mean of 10 with a 95% credible interval from 8 to 12, which means \_\_\_\_\_. This interval depends on \_\_\_\_\_.



1 / 1  
points

6.

Person A has a low prior belief in homeopathy. Person B has a high prior belief in homeopathy. They both read a study about homeopathy, which reports a positive effect and  $p < 0.05$ . Person A would be more likely than person B to conclude that \_\_\_\_\_, Person B would be more likely than Person A to think that \_\_\_\_\_.



1 / 1  
points

7.

You perform five tests **without** correcting for multiple comparisons. The error rate for each individual test is \_\_\_\_\_. After using the Bonferonni correction, the individual error rate for each individual test is \_\_\_\_\_.



1 / 1  
points

8.

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You perform two studies to test a potentially life-saving drug. Both studies have 80% power. What is the chance of two type 2 errors (of false negatives) in a row?

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1 / 1  
points

9.

Study A and B are completely identical, except that study A was entirely pre-registered at a journal. Both contain analyses with covariates. Based on research on flexibility in the data analysis, we can expect that on average study A will have \_\_\_\_; the covariate analyses are \_\_\_\_.



1 / 1  
points

10.

An example of an unstandardized effect size is \_\_\_\_; unstandardized effect sizes \_\_\_\_.



1 / 1  
points

11.

When the difference between means is 5, and the standard deviation is 4, Cohen's  $d$  is \_\_\_\_ which is \_\_\_\_ according to the benchmarks proposed by Cohen.

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points

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12.

The difference between eta-squared and partial eta-squared is \_\_\_\_, the difference between eta-squared and omega-squared is \_\_\_\_.

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1 / 1

points

13.

You replicate an older study, which reported both credible intervals and confidence intervals. You also calculate both. Which statement is correct?

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1 / 1

points

14.

In studies with less participants, parameters like effect sizes vary \_\_\_\_, the power to detect a true effect size depends, among other things, on \_\_\_\_.

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0 / 1

points

15.

You performed a p-curve analysis and found a skewed distribution of p-values which peaks around  $p = 0.045$ , what does this mean?

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1 / 1

points

16.

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You predict that your intervention will increase all participants' performance on a test, this is an example of \_\_\_\_\_. After the study you conclude that the intervention only works for women but not men, this is an example of \_\_\_\_\_.

20/21 points (95%)



1 / 1  
points

17.

Predicting that a measured variable differs in two groups, without random assignment to conditions, is often\_\_\_\_\_.



1 / 1  
points

18.

Going through a dataset and looking at which effects are present **can be problematic** when \_\_\_\_\_. It is **\*not\* problematic** when you \_\_\_\_\_.



1 / 1  
points

19.

The main goal of a direct replication is to \_\_\_\_\_; replications are important **according to Popper** because \_\_\_\_\_.