1 Quiz: Do you need this course?

From Shravan Vasishth's statistics notes.

Instructions: choose only one answer by circling the relevant letter. If you don't know the answer, just leave the answer blank.

1. Standard error is

   a the standard deviation of the sample scores

   b the standard deviation of the distribution of sample means

   c the square root of the sample variance

   d 2 times the standard deviation of sample scores

2. If we sum up the differences of each sample score from the sample's mean (average) we will always get

   a a large number

   b the number zero

   c a different number each time, sometimes large, sometimes small

   d the number one

3. As sample size increases, the standard error of the sample should

   a increase

   b decrease

   c remain unchanged

4. The 95% confidence interval tells you

   a that the probability is 95% that the population mean is equal to the sample mean

   b that the sample mean lies within this interval with probability 95%

   c that the population mean lies within this interval with probability 95%

   d none of the above

5. The 95% confidence interval is roughly equal to

   a 0.5 times the standard error

   b 1 times the standard error

   c 1.5 times the standard error

   d 2 times the standard error

6. The 95% confidence interval is — the 90% confidence interval

a wider than

b narrower than

c same as

7. A p-value is

   a the probability of the null hypothesis being true

   b the probability of the null hypothesis being false

   c the probability of the alternative hypothesis being true

   d the probability of getting the sample mean that you got (or a value more extreme) assuming the null hypothesis is true

   e the probability of getting the sample mean that you got (or a value less extreme) assuming the null hypothesis is true

8. If Type I error probability, alpha, is 0.05 in a t-test, then

   a we have a 5% probability of rejecting the null hypothesis when it is actually true

   b we have a 95% probability of rejecting the null hypothesis when it is actually true

   c we necessarily have low power

   d we necessarily have high power

9. Type II error probability is

   a the probability of accepting the null when it's true

   b the probability of accepting the null when it's false

   c the probability of rejecting the null when it's true

   d the probability of rejecting the null when it's false

10. When power increases

    a Type II error probability decreases

    b Type II error probability increases

    c Type II error probability remains unchanged

11. If we compare two means from two samples, and the $p>0.05$ (p is greater than 0.05), we can conclude

    a that the two samples comes from two populations with different means

    b that the two samples comes from two populations with identical means

    c that we don't know whether two samples comes from two populations with identical means or not