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Introducing the Standard Errors - Quiz

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Question 1

1/1 point (graded)

True or False: As your sample size goes up, your standard error will increase.

a. True

b. False ✔

Explanation

From the formula Professor Ellison showed in class, we know that $SE(\bar{X}_n) = \frac{\sigma}{\sqrt{n}}$. So as your sample size increases, the standard error decreases. Intuitively, the larger your sample size, the more precise your estimates will be.

Submit You have used 1 of 1 attempt

✔ Correct (1/1 point)

Question 2

1/1 point (graded)

What is the relationship between sample size and confidence intervals? (Select all that apply)

- [x] a. the larger your sample size, the narrower your confidence interval.
- [ ] b. the smaller your sample size, the narrower your confidence interval.
- [ ] c. the larger your sample size, the wider your confidence interval.
- [x] d. the smaller your sample size, the wider your confidence interval.

✔

Explanation

Remember, just like standard errors, confidence intervals are just another way to represent the same information about the tightness of the distribution of the estimator. So the larger your sample size, the smaller your standard errors, and so the tighter the distribution of the estimator, and the narrower your interval. Similarly, the smaller your sample size, the larger your standard errors, and so the more dispersed the distribution of your estimator, and the wider your interval.

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Discussion
Topic: Module 7 / Introducing the Standard Errors - Quiz

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