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Module 4 Quiz

Adapt 236

1/1 point (graded)

One hundred (100) randomly chosen high school students were asked if they had ever smoked marijuana. Sixty (60) students answered, and 25% said that they had smoked marijuana. The school officials reported that 25% of the high school students had smoked marijuana. Is this research biased? If so, which bias was exhibited?

The research was not biased.			
Selection bias			
Publication bias			
Submit You have used 1 of 1 attempt			

✓ Correct (1/1 point)

Adapt 241

1/1 point (graded)

One 16-ounce bottle of an energy drink has an average of 500 mg of caffeine with a standard deviation of 25 mg. In a carton containing 30 bottles, what is the standard deviation of the average amount of caffeine?

0.83

0 1.20

4.56

25.0

Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)

Adapt 244

1/1 point (graded)

Assume that 8% of all Americans have diabetes. In a random sample of 50 Americans, what is the standard deviation of the proportion of people in the sample that have diabetes?

O.01
0.03
● 0.04
O.06
Submit You have used 1 of 1 attempt
✓ Correct (1/1 point)

Adapt 247

0/1 point (graded)

One 16-ounce bottle of an energy drink has an average of 400 mg of caffeine with a standard deviation of 20 mg. What is the probability that the average caffeine in a sample of 25 bottles is no more than 395 milligrams?

O 0.05

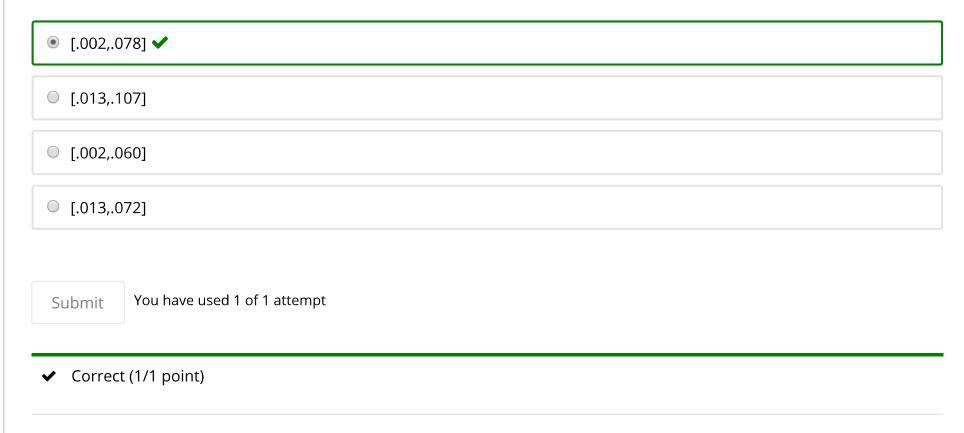
0.11		
• 0.16 X		
0.22		
Submit	You have used 1 of 1 attempt	
× Incorrec	ct (0/1 point)	
Adapt 250	Adapt 250	
1/1 point (graded) A drawer contains 4 capsules numbered 1, 3, 5, and 7. A sample of size 2 is drawn with replacement. What is the standard deviation of x-bar?		
0 1.24		
● 1.58 ✔		
0 1.66		
0 1.75		

You have used 1 of 1 attempt Submit ✓ Correct (1/1 point) Adapt 256 1/1 point (graded) An auditor is trying to estimate the average size of an invoice. A sample of 64 invoices from a large population of invoices yields a mean of \$300 with a standard deviation of \$40. What is the 99% confidence interval? [\$287, \$313] [\$290, \$310] [\$291, \$309] [\$298, \$302] You have used 1 of 1 attempt Submit ✓ Correct (1/1 point)

Adapt 267

1/1 point (graded)

Your company manufacturers Bluetooth chips. To estimate the fraction of defective chips, you sample 100 chips, and find 4 are defective. You are 95% sure the actual percentage of defective Bluetooth chips is within which of the following ranges?

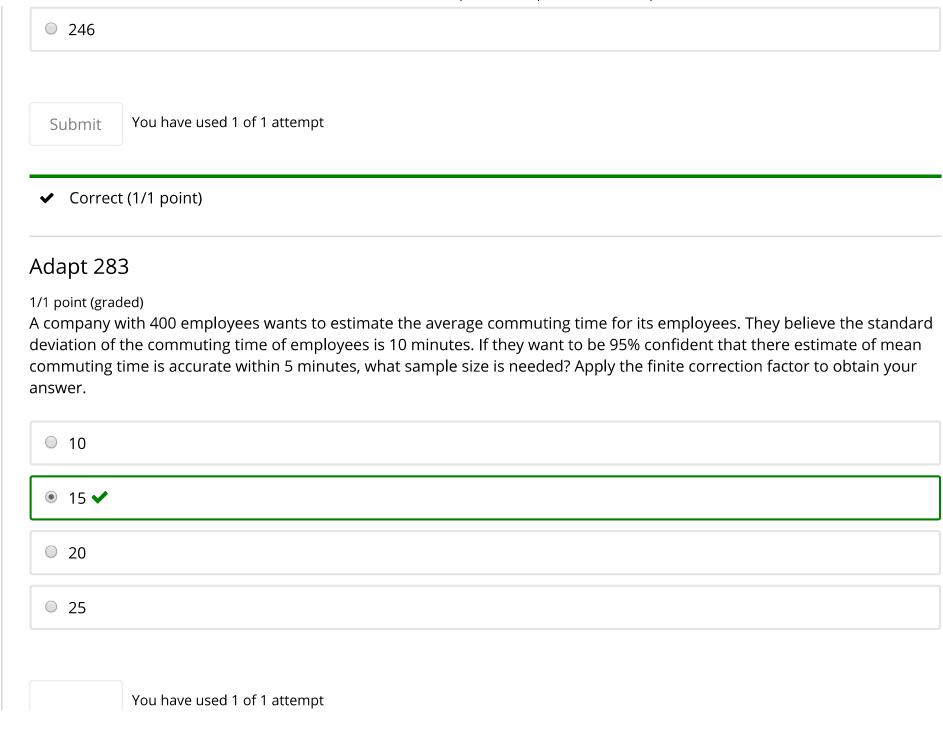


Adapt 271

1/1 point (graded)

A company with 500 employees wants to estimate the fraction of employees whose commute to work exceeds 60 minutes. They survey 200 employees and find 60% of those surveyed have a commute exceeding 60 minutes. They are 95% confident that the actual fraction of employees whose commute exceeds 60 minutes is within which of the following ranges? Apply the finite correction factor to your answer.

○ 53.2% to 66.8%		
● 54.7% to 65.3% ✔		
○ 55.1% to 64.8%		
○ 56.5% to 63.5%		
Submit You have used 1 of 1 attempt		
✓ Correct (1/1 point)		
Adapt 274		
1/1 point (graded) We are trying to estimate the average salary of employees at a company. Assume the standard deviation of employee salaries is \$20,000, and we want to be 95% sure our estimate is accurate within \$3000. What size sample is needed?		
© 62		
© 85		



Submit

✓ Correct (1/1 point)

Adapt 288

0/1 point (graded)

If you obtain 0 successes or n successes when using n trials to estimate a population proportion, our formula for a 95% confidence interval breaks down and has a width of 0. In these situations, the formulas in Module4Quiz_Blyth.xlsx enable us to compute 95% confidence intervals for a population proportion.

Suppose in 10,000 knee replacements at a hospital, none resulted in infections. You are 95% sure the real chance of an infection on a knee replacement falls within which interval?

- 0, .0001]
- 0, .0002]
- 0, .0003]
- [0, .0004] X

Submit

You have used 1 of 1 attempt

★ Incorrect (0/1 point)

Adapt 292

0/1 point (graded)

If you obtain 0 successes or n successes when using n trials to estimate a population proportion, our formula for a 95% confidence interval breaks down and has a width of 0. In these situations, the formulas in Module4Quiz_Blyth.xlsx enable us to compute 95% confidence intervals for a population proportion.

Suppose that 50 samples of water were tested for contamination, and all samples were positive. You are 95% sure the real chance that the water is contaminated falls within which interval?

- 0 [.942, 1]
- 0 [.952, 1]
- [.962, 1] X
- [.972, 1]

Submit

You have used 1 of 1 attempt

★ Incorrect (0/1 point)

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