

8.1 Confidence Intervals for Proportions

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January 28, 2021

The screenshot shows a statistics quiz interface. At the top, there's a navigation bar with a bell icon, a dropdown menu for '8.2 Confidence', and a user profile for 'Michael Brodskiy'. Below this is a breadcrumb trail: 'Statistics AP-Thompson-Year-12462 (66479) > Activities and Due Dates > 8.2 Confidence interval for proportions'. The main area is divided into a left sidebar and a right content area. The sidebar shows a list of 17 questions with their respective scores: Question 1 (100% Correct), Question 2 (90% Correct), Question 3 (100% Correct), Question 4 (95% Correct), Question 5 (95% Correct), Question 6 (100% Correct), Question 7 (90% Correct), Question 8 (100% Correct), and Question 9 (95%). The right content area displays 'Question 1 of 17' and an 'Assignment Score' of 95.6%. It includes buttons for 'Resources', 'Show Log', 'Solution', 'Next Question', and 'My Attempt'. The question text reads: 'Latoya wants to estimate the proportion of the seniors at her boarding school who like the cafeteria food. She interviews an SRS of 50 of the 175 seniors and finds that 14 think the cafeteria food is good. Which of the conditions for calculating a confidence interval for the population proportion p has not been met?'. The options are: 'All of the conditions have been met.', 'Large Counts condition is not met because $n\hat{p} < 30$.', 'Large Counts condition is not met because $n(1 - \hat{p}) < 30$.', 'Random condition is not met.', and '10% condition is not met because the sample size of 50 is greater than 10% of the population size (175) of seniors at the boarding school.' The '10% condition' option is selected. At the bottom of the content area, a green bar indicates 'Solved'.

1 of 17 Questions

Assignment Score: 95.6%

Resources Show Log Solution Next Question

My Attempt

Question 1 of 17

Latoya wants to estimate the proportion of the seniors at her boarding school who like the cafeteria food. She interviews an SRS of 50 of the 175 seniors and finds that 14 think the cafeteria food is good.

Which of the conditions for calculating a confidence interval for the population proportion p has not been met?

- ☐ All of the conditions have been met.
- ☐ Large Counts condition is not met because $n\hat{p} < 30$.
- ☐ Large Counts condition is not met because $n(1 - \hat{p}) < 30$.
- ☐ Random condition is not met.
- ☒ 10% condition is not met because the sample size of 50 is greater than 10% of the population size (175) of seniors at the boarding school.

Solved