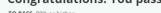
GRADE 100%



TO PASS 80% or higher

0.0325 0.0637 0.1274

Sample Size & Assumptions LATEST SUBMISSION GRADE 100% 1. A poll was done at a public University asking undergraduate students whether they are an in state student or out of state 1/1 point student. A sample of 232 undergraduate students at the University were asked and it was revealed that 43% of students were from out of state. From the results, a 95% confidence interval was calculated to be (0.3663, 0.4937). Which of the following corresponds to the value of 43%? (Select all that apply) Statistic ✓ Correct Correct. Parameter Sample proportion ✓ Correct Correct. Population proportion Estimate of the population proportion ✓ Correct Correct. ☐ Test statistic 2. In order to make the above confidence interval researchers first had to check their assumptions. Select all the appropriate assumptions that are needed to create a one population proportion confidence interval. ☐ The population proportion comes from data that is considered a simple random sample The sample proportion comes from data that is considered a simple random sample ✓ Correct The number of respondents who replied "out of state" must be at least 10 Correct. The number of respondents who replied "in state" must be at least 10 ✓ Correct Correct. ☐ The distribution of our population proportion must be normally distributed 3. What is the margin of error for the given 95% confidence interval above? 1/1 point 0 1.96 0.00106

	✓ Correct	
4.	A larger sample was taken and the same sample proportion was found. How would the width of the 95% confidence interval change from our initial interval? Widen Shorten Stay the same Unable to tell	1/1 point
	✓ Correct	
5.	If the researcher would like to have their confidence interval be narrower, more precise, which of the following would achieve this? Change the confidence level to 90% Change the confidence level to 99% Calculate a conservative 95% confidence interval	1/1 point
6.	What minimum sample size does the researcher need in order to create a 95% conservative confidence interval with a margin of error of no more than 4%? 24.5 25 600	1/1 point
	○ 600.25◎ 601✓ Correct	
7.	What minimum sample size does the researcher need in order to create a 98% conservative confidence interval with a margin of error of no more than 3%? 1067.11 1068 1502.85 1503	1/1 point
	✓ Correct	
8.	 Which of the following would be considered an appropriate interpretation of the given 95% confidence interval? We estimate, with 95% confidence that the sample proportion of out of state undergraduate students at this University is between (0.3663, 0.4937) We are 95% confident that the population proportion of out of state undergraduate students at this University is between 36.63% and 49.37% There is a 95% chance that the population proportion of out of state undergraduate students at this University is between 36.63% and 49.37% If we repeated this study many times we would expect to obtain the true population proportion of out of state undergraduate students at this University 95% of the time in the resulting confidence interval of (0.3663, 0.4937) 	1/1 point
9.	Which of the following best describes the confidence level in the context of the problem? If we repeated this study many times, each time producing a new sample (of the same size) from which a 95% confidence interval is computed, then we would expect the population proportion of out of state undergraduate students at this University to be contained within the (0.3663, 0.4937) interval 95% of the time. If we repeated a similar study many times, each time producing a new sample (of various sizes) from which a 95% confidence interval is computed, then 95% of the resulting confidence intervals would be expected to contain the population proportion of out of state undergraduate students at this University.	1/1 point

0	If we repeated this study many times, each time producing a new sample (of the same size) from which a 95% confidence interval is computed, then 95% of the resulting confidence intervals would be expected to contain the sample proportion of out of state undergraduate students at this University.	
•	If we repeated this study many times, each time producing a new sample (of the same size) from which a 95% confidence interval is computed, then 95% of the resulting confidence intervals would be expected to contain the population proportion of out of state undergraduate students at this University.	
	✓ Correct	
	sed on the reported 95% confidence interval (and no additional calculations), does it appear there is a minority undergraduate students at the University that are from out of state?	1/1 point
		1/1 point
	undergraduate students at the University that are from out of state?	1/1 point
	undergraduate students at the University that are from out of state? Yes, because 43% is below 50%	1/1 point
	undergraduate students at the University that are from out of state? Yes, because 43% is below 50% No, because our sample size is not large enough	1/1 point
	undergraduate students at the University that are from out of state? Yes, because 43% is below 50% No, because our sample size is not large enough No, because the entire interval is below 50%	1/1 point