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| **1.** An auditor wants to estimate what proportion of a bank’s commercial loan files are incomplete. The auditor randomly samples 100 files and finds 9 are incomplete. Using a 95% confidence interval, estimate the true proportion of incomplete files for ALL the bank’s commercial loans.HTML Editor**2.** An auditor wants to estimate what proportion of a bank’s commercial loan files are incomplete. The auditor wants to be within 4% of the true proportion when using a 95% confidence level. How many files must the auditor sample? No estimate of the proportion is available, so use 0.5 for the population proportion.**5.** If Tom gets a 70 on a physics test where the mean is 65 and the standard deviation is 5.8, where does he stand in relation to his classmates?A) he is in the bottom 10%B) he is in the top 10%C) he is in the bottom 20%D) he is in the top 20%**7.** Let’s assume you have taken 100 samples of size 64 each from a normally distributed population. Calculate the standard deviation of the sample means if the population’s variance is 49.**8.** A business wants to estimate the true mean annual income of its customers. It randomly samples 200 of its customers. The mean annual income was $52,500 with a standard deviation of $1,800. Find a 95% confidence interval for the true mean annual income of the business’ customers.HTML Editor**10.** In a normal distribution with mu = 25 and sigma = 3 what number corresponds to z = -3?A) none of theseB) 18C) 20D) 16**11.** According to the Central Limit Theorem, how big of a sample is necessary to make sure the sampling distribution of sample means is normally distributed, if we know the underlying population is already normally distributed?HTML Editor**12.** The area to the left of "z" is .9976. What z score corresponds to this area?A) -2.89B) 2.82C) none of theseD) 2.85**13.** Interpret a 95% confidence interval of (3.355, 3.445) for the population mean.HTML Editor**14.** In the standard normal distribution the mean is always \_\_\_A) 0B) none of theseC) 2D) 1**16.** In the standard normal distribution the variance is always \_\_\_A) 0B) none of theseC) 1D) 2**17.** The area under the standard normal curve isA) 0B) 1C) none of theseD) 2**19.** An automobile safety engineer wants to estimate the mean cost to repair a Chevy Corvette involved in a 30 mile per hour head-on collision. The engineer crashes 20 Corvettes and finds the mean damage is $16,300 with a standard deviation of $2,330. Find a 95% confidence interval for the true mean cost to repair this type of car.HTML Editor**20.** A business wants to estimate the true mean annual income of its customers. The business needs to be within $500 of the true mean. The business estimates the true population standard deviation is around $2,300. If the confidence level is 95%, find the required sample size in order to meet the desired accuracy.HTML Editor |



**Tie**

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| **Assessment:** |  |
| **Question Set:** |  |

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