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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](javascript:void(0);)  **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](javascript:void(0);)  **10.**  In a normal distribution with mu = 25 and sigma = 3 what number corresponds to z = -3?  A) none of these B) 18 C) 20 D) 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](javascript:void(0);)  **12.**  The area to the left of "z" is .9976. What z score corresponds to this area?  A) -2.89 B) 2.82 C) none of these D) 2.85  **13.**  Interpret a 95% confidence interval of (3.355, 3.445) for the population mean.    [HTML Editor](javascript:void(0);)  **14.**  In the standard normal distribution the mean is always \_\_\_  A) 0 B) none of these C) 2 D) 1    **16.**  In the standard normal distribution the variance is always \_\_\_  A) 0 B) none of these C) 1 D) 2  **17.**  The area under the standard normal curve is  A) 0 B) 1 C) none of these D) 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](javascript:void(0);)  **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](javascript:void(0);) |



**Tie**

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

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