

SOLUTIONS

- (1) Sampling distributions are NOT necessary for _____? **(B)**
- (2) If making an inference about μ with a sample size of 6, then $P(-2 < t < 2) \approx$ _____. **(C)**
- (3) Which is a true statement about the null hypothesis? **(E)**
- (4) Which p-value indicates the strongest evidence in favor of a research hypothesis? **(A)**
- (5) A university administrator claims: "There is too much plagiarism in our university. In cases of suspected plagiarism we will continue to give the student the benefit of the doubt, but we must have a substantial amount of doubt." Which is most consistent with this administrator's position? **(E)**
- (6) Rounding to the nearest whole numbers, what is the 80% confidence interval estimator of μ ? **(D)**
- (7) What is the conclusion for the following hypothesis test? **(A)**
- (8) If a second random sample ($n = 11$) is taken from the same population, what is the approximate probability that the sample mean of the second sample will be greater than or equal to 42? **(D)**
- (9) If $[10.2, 14.6]$ is the 95% CI estimator of the mean, in which case should you infer the research hypothesis is true? **(E)**
- (10) Which test statistic (un-standardized) would result in the LARGEST p-value? **(A)**
- (11) To know if there is a statistically significant difference between a sample mean of 350 and the value specified in the null hypothesis, what is the most important additional information you need? **(B)**
- (12) For $n = 20$, the Type II error would be the largest in which case? **(A)**
- (13) For $\alpha = 0.05$ and $n = 25$, what is the un-standardized rejection region? **(B)**
- (14) If the sample proportion is 0.52, which is the best conclusion? **(C)**
- (15) If the true population proportion were 0.56 what would be the probability of a Type II error? **(C)**
- (16) A large random sample is collected: $n = 900$, $\bar{X} = 10$ and $s^2 = 2500$. A confidence interval estimator of μ is found: $(5.317, 14.683)$. What is the confidence level? **(D)**
- (17) When making an inference about the difference between two population means, what is the primary benefit of assuming equal population variances? **(B)**
- (18) Which is the most plausible explanation for why a result is statistically significant but not economically significant? **(A)**