

14. In the following situation, assume the random variable is normally distributed and use a normal distribution or a t-distribution to construct a 90% confidence interval for the population mean. If convenient, use technology to construct the confidence interval.
- (a) In a random sample of 10 adults from a nearby county, the mean waste generated per person per day was 4.73 pounds and the standard deviation was 1.39 pounds.
- (b) Repeat part (a), assuming the same statistics came from a sample size of 600. Compare the results.
- (a) For the sample of 10 adults, the 90% confidence interval is (,).
- (Round to two decimal places as needed.)
- (b) For the sample of 600 adults, the 90% confidence interval is (,).
- (Round to two decimal places as needed.)
- Choose the correct observation below.
- ☐ A. The interval from part (a), which uses the normal distribution, is narrower than the interval from part (b), which uses the t-distribution.
- ☐ B. The interval from part (a), which uses the t-distribution, is narrower than the interval from part (b), which uses the normal distribution.
- ☐ C. The interval from part (a), which uses the t-distribution, is wider than the interval from part (b), which uses the normal distribution.
- ☐ D. The interval from part (a), which uses the normal distribution, is wider than the interval from part (b), which uses the t-distribution.

15. Use the given confidence interval to find the margin of error and the sample proportion.

(0.629, 0.657)

$E =$ (Type an integer or a decimal.)

$\hat{p} =$ (Type an integer or a decimal.)