Lesson 9.3 Practice: The Sampling Distribution of a Sample Mean

School Launch · Statistics · Unit 9: Sampling Distributions · Worksheet A

Calculator / tables

Name _____ Date _____ Score _____ / 10

Show your work under each problem, one step per line, and check your answer. Word problems: name the unknown, write the equation, solve, and answer in a sentence with units.

1. A population has mean 187 and SD 28. For samples of $n = 61$, find $\sigma_{\bar{x}}$ (nearest hundredth). EASY

2. A population has mean 130 and SD 24. For samples of $n = 51$, find $\sigma_{\bar{x}}$ (nearest hundredth). EASY

3. A population has mean 95 and SD 18. For samples of $n = 44$, find $\sigma_{\bar{x}}$ (nearest hundredth). EASY

4. A population has mean 189 and SD 5. For samples of $n = 24$, find $\sigma_{\bar{x}}$ (nearest hundredth) and $P(\bar{x} > 190.9)$ (four decimals), assuming normality. MEDIUM

5. A population has mean 99 and SD 16. For samples of $n = 69$, find $\sigma_{\bar{x}}$ (nearest hundredth) and $P(\bar{x} > 99.7)$ (four decimals), assuming normality. MEDIUM

6. A population has mean 102 and SD 6. For samples of $n = 12$, find $\sigma_{\bar{x}}$ (nearest hundredth) and $P(\bar{x} > 104.7)$ (four decimals), assuming normality. MEDIUM

7. A population has mean 197 and SD 16. For samples of $n = 97$, find $\sigma_{\bar{x}}$ (nearest hundredth) and $P(\bar{x} > 199.1)$ (four decimals), assuming normality. MEDIUM

8. A population has mean 137 and SD 27. For samples of $n = 82$, find $\sigma_{\bar{x}}$ (nearest hundredth) and $P(\bar{x} > 139.2)$ (four decimals), assuming normality. HARD

9. A population has mean 190 and SD 6. For samples of $n = 47$, find $\sigma_{\bar{x}}$ (nearest hundredth) and $P(\bar{x} > 191.0)$ (four decimals), assuming normality. HARD

10. A population has mean 73 and SD 9. For samples of $n = 34$, find $\sigma_{\bar{x}}$ (nearest hundredth) and $P(\bar{x} > 74.7)$ (four decimals), assuming normality. HARD