Lesson 9.2 Practice: The Sampling Distribution of a Sample Proportion

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. Population proportion $p = 0.8$, samples of $n = 297$. Give the mean and SD of $\hat{p}$. EASY

2. Population proportion $p = 0.4$, samples of $n = 309$. Give the mean and SD of $\hat{p}$. EASY

3. Population proportion $p = 0.5$, samples of $n = 368$. Give the mean and SD of $\hat{p}$. EASY

4. Population proportion $p = 0.6$, samples of $n = 280$. Give the mean and SD of $\hat{p}$, and $P(\hat{p} < 0.573)$ (four decimals). MEDIUM

5. Population proportion $p = 0.7$, samples of $n = 134$. Give the mean and SD of $\hat{p}$, and $P(\hat{p} > 0.751)$ (four decimals). MEDIUM

6. Population proportion $p = 0.7$, samples of $n = 403$. Give the mean and SD of $\hat{p}$, and $P(\hat{p} > 0.728)$ (four decimals). MEDIUM

7. Population proportion $p = 0.7$, samples of $n = 223$. Give the mean and SD of $\hat{p}$, and $P(\hat{p} > 0.749)$ (four decimals). MEDIUM

8. Population proportion $p = 0.6$, samples of $n = 462$. Give the mean and SD of $\hat{p}$, and $P(\hat{p} < 0.572)$ (four decimals). HARD

9. Population proportion $p = 0.5$, samples of $n = 273$. Give the mean and SD of $\hat{p}$, and $P(\hat{p} > 0.549)$ (four decimals). HARD

10. Population proportion $p = 0.4$, samples of $n = 175$. Give the mean and SD of $\hat{p}$, and $P(\hat{p} > 0.45)$ (four decimals). HARD