Lesson 5.1 Practice: Populations, Samples and Bias

School Launch · Statistics · Unit 5: Collecting Data: Samples and Experiments · 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 school of 270 students: a simple random sample of 39 is chosen. What is the probability that a particular student is chosen? (fraction and percent, nearest tenth)

EASY

2. A magazine mailed 1087 surveys and got 124 back; 60 said yes. Find the response rate and the percent yes among responders (nearest tenth). Name the main bias risk. EASY

3. A school of 647 students: a simple random sample of 66 is chosen. What is the probability that a particular student is chosen? (fraction and percent, nearest tenth)

EASY

4. A magazine mailed 1726 surveys and got 96 back; 68 said yes. Find the response rate and the percent yes among responders (nearest tenth). Name the main bias risk.

MEDIUM

5. A school has three grades with 319, 180 and 178 students. A proportional stratified sample of 53 is taken. How many from each grade (nearest whole)? For a systematic sample of 53 from 925, what is the interval k?

MEDIUM

6. A magazine mailed 1476 surveys and got 179 back; 89 said yes. Find the response rate and the percent yes among responders (nearest tenth). Name the main bias risk.

MEDIUM

7. A school has three grades with 482, 100 and 322 students. A proportional stratified sample of 62 is taken. How many from each grade (nearest whole)? For a systematic sample of 62 from 1759, what is the interval k ? MEDIUM

8. A magazine mailed 604 surveys and got 274 back; 197 said yes. Find the response rate and the percent yes among responders (nearest tenth). Name the main bias risk. HARD

9. A school has three grades with 439, 301 and 306 students. A proportional stratified sample of 58 is taken. How many from each grade (nearest whole)? For a systematic sample of 58 from 1811, what is the interval k ? HARD

10. A magazine mailed 1192 surveys and got 379 back; 341 said yes. Find the response rate and the percent yes among responders (nearest tenth). Name the main bias risk. HARD