

## **6-1** Additional Practice



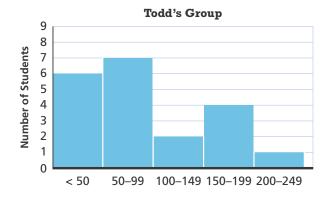


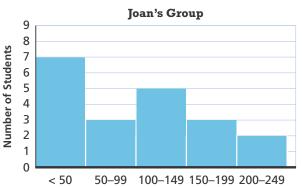
- 1. A bagel shop takes a survey to find the approximate percentage of its customers who prefer the new shop hours. What is the population of this survey?
- 2. During a middle school baseball game, every spectator placed his or her ticket stub into one of several containers. After the game, the coach chose eight people to march in the sportsmanship parade. What is the sample in this situation?

3. Todd and Joan each generate a random sample of the 250 students in Grade 7 at their school. Each sample has 20 students. Todd and Joan each write the numbers 1 through 250 on small pieces of paper and put them in different jars. Then they draw numbers randomly.

Todd's Sample				
19	162	28	33	
75	29	180	7	
154	125	143	201	
14	86	93	66	
79	188	55	78	

Joan's Sample				
207	13	95	73	
28	128	191	48	
119	175	212	8	
136	39	49	123	
20	167	97	147	





Describe two things you notice about the two random samples taken from the same population.

- **4.** Trevor's science class is studying the rainfall on the first day of each month for one year. Explain why studying the rainfall on the first day of September, October, and November is not a random sample.
- **5.** To predict the performance of her first period class on their next quiz, a teacher randomly selects eight students from the class and takes the mean of their scores on the last quiz. Is this sample representative of the class's performance on the quiz? Explain your reasoning.

- **6.** To predict the outcome of the vote for the school board election, a candidate uses random numbers to pick 100 registered voters. She calls these voters and asks how they plan to vote. Is the sample taken in this problem representative of the population? Explain.
- 7. Matilda recently took a statistics quiz in her math class. In one question, 45 of 900 visitors at a local craft show were surveyed about the cost of admission to the show. Matilda incorrectly stated that the sample in this situation was represented by the 900 visitors at the craft show.
  - a. What is Matilda's error?
  - **b.** What is the actual sample?
- 8. A movie theater considers upgrading to offer luxury seating. The manager randomly surveys 1,200 residents who live within 10 miles of the theater. What is the sample in this situation?
- **9.** Mariah wants to randomly sample 4 of the 26 students in her class. Describe a process Mariah could use to create a random sample with 4 students.
- **10. Higher Order Thinking** A population of middle school students consists of 100 boys and 250 girls. If a representative sample from this population contains 20 boys, how many girls would be expected in this sample? Explain.

## **Assessment Practice**

- **11.** Vanessa's class is studying the number of car commercials on television between 6 P.M. and 8 P.M. for five days. Which is the best sample for Vanessa to use?
  - ⓐ The commercials between 6 P.M. and 8 P.M. on each day
  - ® The first five commercials each of the five days
  - © The commercials shown between 6 P.M. and 7 P.M. on a randomly chosen day
  - © The commercials shown between 6:30 p.m. and 7:30 p.m. on three randomly chosen days