Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| 1. To evaluate customer satisfaction, a grocery store gives triple coupons to anyone who enters the store and fills out a survey.  Fair or biased? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Why? | 2. Kathy wants to know how many students in her city use the internet for learning purposes. She used an email poll. Based on the replies to her poll, she found that 83% of those surveyed used the internet.  Biased or unbiased? Why? |
| 3. Which one of the following sampling methods would give unbiased results, if you need to find out the number of people in your town liking vanilla or chocolate ice creams?  **Choices:**  A.  ask my neighbors  B.  randomly select a few ice cream shops in town, and question people coming there  C.  ask my friends  D.  ask my classmates | 4. To determine the favorite sport of the citizens of Graham, Connor surveyed people attending a soccer game.  Biased or Unbiased? Why? |
| 5. To determine whether money should be spent on the music program or athletics, the principal surveyed parents at a band concert.  Biased or Unbiased? Why? | 6. To determine the favorite soft drink in a town, I called every 50th number in the phone book.  Biased or Unbiased? Why? |
| 7. The manager of a local cell phone company wants to conduct a survey to determine what kind of musical ring tones people typically use. Which method should she choose – and why?  A. survey the listeners of a rock radio station  B. survey a group of people standing in line  for a symphony  C. Suppose she decides to mail a survey to every 100th household in the area. | 8. To determine what kind of movies people like to watch, every tenth person who walks into a video rental store is surveyed. The store carries all kinds of movies. Out of 180 customers surveyed, 62 stated that they prefer action movies.  Is the sampling method unbiased? If so, what percent of people prefer action movies? |
| 9. A television program asks its viewers to visit a Web site to indicate their preference for two presidential candidates. 76% of the viewers who responded preferred candidate A, so the television program announced that most people prefer candidate A.  Is the sampling method unbiased? If so, in a town of 50,000, how many would you expect to choose candidate A? | 10. To determine what kind of sport junior high school students like to watch, 100 students are randomly selected from each of four junior high schools in a city. Of these, 47% like to watch football. The superintendent concludes that about half of all junior high students like to watch football.  Is the conclusion valid? |
| 11. The Student Council at a new junior high school surveyed 5 students from each of the 10 homerooms to determine what mascot students would prefer. The results of the survey are shown at the right. If there are 375 students at the school, predict how many students prefer a tiger as the school mascot. | 12. During flight, a pilot determined that 20% of the  passengers were traveling for business and 80% were traveling for pleasure. If there are 120 passengers on the next flight, how many can be expected to be traveling for pleasure? |
| 13. Jared randomly surveyed some students to determine their lunch habits. The results are shown in the table. If there are 268 students in the school, predict how many bring their lunch from home. | 14. A researcher randomly surveyed 100 households in a small community to determine the number of households that use a professional lawn service. Of these, 27% of households use a professional lawn service. If there are 786 households in the community, how many can be expected to use a professional lawn service? |
| 15. A grocery store asked every 20th person entering the store what kind of pasta they preferred. The results are shown in the table. If the store decides to restock their shelves with 450 boxes of pasta, how many boxes of lasagna should they order? | 16. The manager of a furniture store asks the  first 25 customers who enter the store if they prefer dining room tables made of oak, cherry, or mahogany wood. Of these, 17 said they prefer cherry. If the store manager orders 80 dining room tables in the next shipment, how many should be made of cherry wood? |
| 17. The manager of an amusement park  mailed 2,000 survey forms to households near the park. The results of the survey are shown in the graph at the right. Assume the survey is valid. If there are 5,000 park visitors, about how  many would prefer water rides? | 18. Yolanda wants to conduct a survey to determine what type of salad dressing is preferred by most students at her school. Which of the following  methods is the best way for her to choose a random sample of the students at her school?  A. Select students in her math class.  B. Select members of the Spanish Club.  C. Select ten students from each homeroom.  D. Select members of the girls basketball team. |
| 19. The manager of a zoo wanted to know which animals are most popular among visitors. She surveyed every 10th visitor to the reptile exhibit. Of these, she found that 75% like snakes. If there are 860 visitors to the zoo, which of the following claims is valid?  F. About 645 zoo visitors like snakes.  G. The reptile exhibit is the most popular exhibit.  H. 25% of zoo visitors prefer mammals.  J. No valid prediction can be made since the sample is a convenience sample. | 20. Kwame found that 20 of the 50 students he randomly surveyed in the lunch line liked enchiladas the best. There are 520 students at Kwame’s middle school. Predict how many like enchiladas the best. |