

Practice: Random Samples and Biased Questions

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You want to survey students in your school about their exercise habits. Tell whether the following will give you a random sample. Justify your answer.

1. You select every tenth student on an alphabetical list of the students in your school. You survey the selected students in their first-period classes.

2. At lunchtime you stand by a vending machine. You survey every student who buys something from the vending machine.

Tell whether the following questions are biased or fair. Rewrite biased questions as fair questions.

3. Do you think bike helmets should be mandatory for all bike riders? _____

4. Do you prefer the natural beauty of hardwood floors in your home? _____

5. Do you exercise regularly? _____

6. Do you eat at least the recommended number of servings of fruits and vegetables to ensure a healthy and long life?

7. Do you prefer the look and feel of thick lush carpeting in your living room? _____

8. Do you take a daily multiple vitamin to supplement your diet?

9. Do you read the newspaper to be informed about world events?

10. Do you feel that the TV news is a sensational portrayal of life's problems? _____

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Practice 1: Planning a Survey

1. What population does the sample represent?

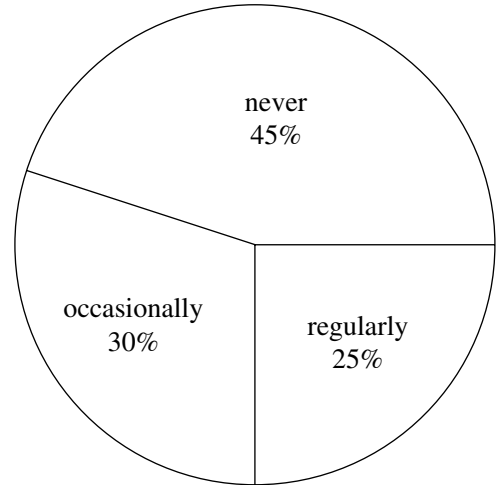
In a mall, 2,146 shoppers (age 16 and older) were asked, “How often do you buy shoe polish?” Here is how they responded.

2. How many people responded in each of the categories?

3. What is the sample size?

4. Can you tell if the sample is random?

5. Is the question open-option or closed-option?



Explain why the survey questions in Exercises 6 and 7 are biased.

6. Would you rather buy the TV dinner with a picture of a luscious, gourmet meal on it, or one in a plain package?

7. Do you want your kids to receive a faulty education by having their school day shortened?

8. A researcher wants to find out what brand of tomato sauce is most popular with people who work full-time. He samples shoppers at a supermarket between 10 A.M. and 2 P.M. Is this a good sample? Explain.

9. You decide to run for student council. What factors are important to consider if you decide to survey your fellow students?

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