

# Algebra

## A138-Samples and Surveys



Questions 1-2 refer to the following information:

Kai lives in New York and he is doing an online survey on his website about people's favorite movie genre. He sends the quiz to every 5<sup>th</sup> visitor to his site.

<p><b>1.</b> What is the population from which the sample is selected from?</p> <p>A) People using the internet      C) People that like to watch movies</p> <p>B) People visiting his site      D) Every person in New York</p>	<p><b>2.</b> What type of sample is this?</p> <p>A) Stratified      C) Systematic</p> <p>B) Random      D) Self-selected</p>
<p><b>3.</b> Rachel is doing a survey on her classmates' favorite afterschool activity. She decides to question every 8<sup>th</sup> person that walks into the school stadium. Is this biased?</p> <p>A) No, because she is questioning every 8<sup>th</sup> person at random.</p> <p>B) No, because she is questioning people at her school.</p> <p>C) Yes, because students going to the school stadium are more likely to be interested in athletics.</p> <p>D) Yes, because she should be questioning every 10<sup>th</sup> person.</p>	<p><b>4.</b> An electronics company selects a random group of its employees' children to test a new video game. Is the sample biased or unbiased?</p> <p>A) Unbiased, because it is an accurate representation of the population.</p> <p>B) Unbiased, because the company is using children to test the video game.</p> <p>C) Biased, because everyone in the sample is related to an employee and doesn't provide an accurate representation of the population.</p> <p>D) Biased, because the company is using children to test the video game.</p>
<p><b>5.</b> The student organization surveys students from chemistry class to decide the school trip. Is this sample biased or unbiased?</p> <p>A) Biased, because the participants are not randomly selected. The sample was focused on one class.</p> <p>B) Biased, because they did not survey the teacher.</p> <p>C) Unbiased, because the students sampled go to this school.</p> <p>D) Unbiased, because they surveyed every student in class.</p>	<p><b>6.</b> An energy drink company gives one half of its subjects a sample of their newest product and the other half plain water. The company then observed the results of a one mile jog. What type of study was this?</p> <p>A) Survey      C) Experimental</p> <p>B) Observational      D) None of the above</p>
<p><b>7.</b> A catering company takes note of which dish people ate from the most at a party.</p> <p>A) Survey</p> <p>B) Observation</p> <p>C) Experiment</p> <p>D) None of the above</p>	<p><b>8.</b> Which of the following is a biased question?</p> <p>A) What is your favorite movie genre?</p> <p>B) Which movie theater do you visit the most?</p> <p>C) Do you like exciting action movies or stupid comedies?</p> <p>D) What is your favorite movie snack?</p>

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<p><b>9.</b> Which of the following is a biased question?</p> <ul style="list-style-type: none"><li>A) Do you prefer healthy vegetables or harmful junk food?</li><li>B) What is your favorite food?</li><li>C) Do you prefer vegetables or chips?</li><li>D) What you buy most often at the market?</li></ul>	<p><b>10.</b> Which is unbiased?</p> <ul style="list-style-type: none"><li>A) Do you like exercising? If so, do you run, swim or dance?</li><li>B) How often do you exercise?</li><li>C) Don't you just love exercise?</li><li>D) Do you like to be lazy and watch TV or active and exercise?</li></ul>
<p><b>11.</b> Select the choices that demonstrate a qualitative data set.</p> <ul style="list-style-type: none"><li>A) Cost of movie tickets</li><li>B) Eye color</li><li>C) Personality of students</li><li>D) Temperature of coffee</li><li>E) Critique on taste of pancakes</li><li>F) Ounces of cream used in pancake batter</li></ul>	<p><b>12.</b> Select the choices that demonstrate a quantitative data set.</p> <ul style="list-style-type: none"><li>A) Dimensions of picture frames</li><li>B) Shirt color</li><li>C) Percentage of students in NHS</li><li>D) Favorite flower species</li><li>E) Weight of students</li><li>F) Type of wood used to build shelves</li></ul>