

**A2.S.2: Analysis of Data: Determine factors which may affect the outcome of a survey**

- 1 A survey completed at a large university asked 2,000 students to estimate the average number of hours they spend studying each week. Every tenth student entering the library was surveyed. The data showed that the mean number of hours that students spend studying was 15.7 per week. Which characteristic of the survey could create a bias in the results?
  - 1) the size of the sample
  - 2) the size of the population
  - 3) the method of analyzing the data
  - 4) the method of choosing the students who were surveyed
- 2 The yearbook staff has designed a survey to learn student opinions on how the yearbook could be improved for this year. If they want to distribute this survey to 100 students and obtain the most reliable data, they should survey
  - 1) every third student sent to the office
  - 2) every third student to enter the library
  - 3) every third student to enter the gym for the basketball game
  - 4) every third student arriving at school in the morning
- 3 A survey is to be conducted in a small upstate village to determine whether or not local residents should fund construction of a skateboard park by raising taxes. Which segment of the population would provide the most unbiased responses?
  - 1) a club of local skateboard enthusiasts
  - 2) senior citizens living on fixed incomes
  - 3) a group opposed to any increase in taxes
  - 4) every tenth person 18 years of age or older walking down Main St.
- 4 Which survey is *least* likely to contain bias?
  - 1) surveying a sample of people leaving a movie theater to determine which flavor of ice cream is the most popular
  - 2) surveying the members of a football team to determine the most watched TV sport
  - 3) surveying a sample of people leaving a library to determine the average number of books a person reads in a year
  - 4) surveying a sample of people leaving a gym to determine the average number of hours a person exercises per week

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**Answer Section**

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| 1 | ANS: 4 | REF: fall0904a2 |
| 2 | ANS: 4 | REF: 011201a2   |
| 3 | ANS: 4 | REF: 011601a2   |
| 4 | ANS: 1 | REF: 061401a2   |