

Classroom Voting Questions: Statistics

Sampling Design

1. Researchers believe that one possible cause of Very Low Birth Weight (VLBW) infants is the presence of undiagnosed infections in the mother. To assess this possibility, they collected data on all pregnant women presenting themselves for prenatal care at large urban hospitals. What is the *appropriate population* for this study?
 - (a) All infants.
 - (b) All infants born as VLBW infant.
 - (c) All infants born in large urban centers.
 - (d) All pregnant women.
 - (e) All pregnant women living in large urban centers.
2. A Gallup survey was taken recently regarding peoples current preference for Democratic nominee for President for which there are 11 candidates. The survey also collected gender information, in order to capture male female differences in preference. For this poll, what is the *primary variable* of interest and *how many values* does it take?
 - (a) gender; 2
 - (b) gender; more than 2
 - (c) candidate preference; 2
 - (d) candidate preference; more than 2
 - (e) political party; 2
 - (f) political party; more than 2
3. Increasing sample size
 - (a) has no effect on bias.
 - (b) increases bias.
 - (c) decreases bias.
4. If you were trying to obtain a random sample of a population of interest for a political poll for a local mayoral race, which of the following approaches would be best to obtain the random sample?

- (a) Randomly assign a number to local companies and, using random-number generation, go to those companies selected and conduct interviews.
 - (b) Randomly select a busy street corner in your city and conduct on-site interviews.
 - (c) Assign a number to people in the local phone book and, using random-number generation, call those randomly selected.
 - (d) Randomly select a couple of television stations from your local cable company using random number generation and ask people through advertising to call a polling line.
 - (e) Randomly dial phone numbers within the selected area and interview those who answer the phone.
5. In order to estimate the proportion of students at a small liberal arts college who watch reality TV for more than 4 hours per week, a random sample of students at the school is selected and each is interviewed about his or her reality TV viewing habits. The students conducting the survey are worried that people that watch reality TV might be embarrassed to admit it and that they may not respond to the survey with honest answers. What type of bias are the students conducting the survey worried about?
- (a) They shouldn't worry - there is no obvious source of bias.
 - (b) Voluntary bias
 - (c) Nonresponse bias
 - (d) Response bias