

Classroom Voting Questions: Elementary Statistics

Displaying Distributions with Graphs

1. A data set consists of fifty three-digit numbers ranging from 180 to 510. The best choice for stems in a stem-and-leaf display would be to use -----.
 - (a) 1 digit stems (1, 2, ..., 5)
 - (b) 2 digit stems (18, 19, ..., 51)
 - (c) 3 digit stems (180, 181, ..., 510)

2. Which of the following statements is most completely true in comparing an appropriately drawn histogram to a stem-and-leaf display of the same data?
 - (a) Both convey the same information about the shape of the distribution.
 - (b) Both convey the same information about gaps in the distribution.
 - (c) Both convey the same information about outliers.
 - (d) Both convey the same amount of information generally.
 - (e) Two from (A)-(D) are correct.
 - (f) Three from (A)-(D) are correct.
 - (g) All from (A)-(D) are correct.

3. Suppose you take a random sample of 10 juniors who bought the same model laptop when they were freshmen. You test these 10 laptops to determine how long their batteries last before needing to be recharged, and you obtain the following data (in hours): 1.2, 1.3, 3.8, 3.9, 3.9, 4.0, 4.1, 4.1, 4.2, 4.3. What should be done with the values 1.2 and 1.3? Which of the following is the best course of action?
 - (a) Delete them from the data set since they are outliers.
 - (b) Keep them in the data set even though they are outliers.
 - (c) Determine why these values were so much lower than the rest, then delete them.
 - (d) Determine why these values were so much lower than the rest, then keep them in the data set, provided they weren't due to data entry errors.

4. You consider all of the adult patients in a large hospital. Which of the following variables would you expect to have a distribution that is left-skewed as revealed by a dot plot of the data?
- (a) height
 - (b) annual income
 - (c) eye color
 - (d) age
5. You consider all of the adult patients in a large hospital. Which of the following variables is continuous?
- (a) height
 - (b) weight
 - (c) number of past surgeries
 - (d) more than one of the above
6. You consider all of the adult patients in a large hospital. Which of the following variables is discrete?
- (a) height
 - (b) eye color
 - (c) number of siblings
 - (d) more than one of the above