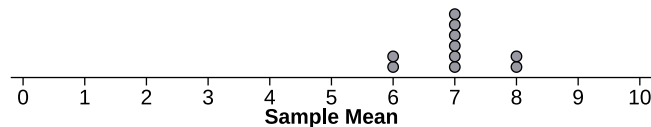


1.
 - a. Both sampling distributions have similar peaks and low bias because the mean of each sampling distribution is close to the true proportion of 0.64.
 - b. The sampling distribution for polling agency 2 has less variability.
 - c. Polling agency 2, because the sampling distribution has less variability.

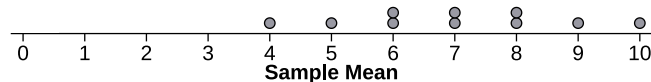
2.
 - a. No. The estimates are biased because they are consistently overestimating the true mean of 3.53 letters. This is likely because students' eyes are drawn to the longer words.
 - b. It would reduce the variability of the sampling distribution.
 - c. It would not affect the bias. The estimates would continue to be overestimates of the true mean. Students' eyes would continue to be drawn to the longer words.
 - d. Select a simple random sample instead of the sampling method used.

3.
 - a. Answers may vary. One possible answer is 35 and 75 (mean = 55 years).
 - b. Answers may vary. One possible answer is 39, 40, 42, 43, and 75 (mean = 47.8 years).
 - c. Less likely. With a larger sample size, the variability of the sample means is lower, making it less likely to be a certain distance away from the true mean.

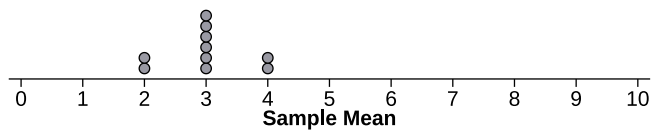
4.
 - a. Answers may vary.



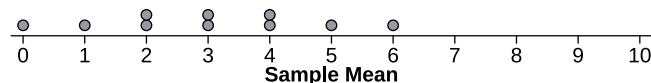
- b. Answers may vary.



- c. Answers may vary.



- d. Answers may vary.

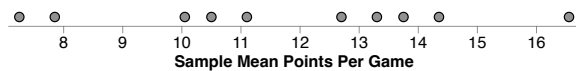


5. a. 11.74 points per game

b.

Sample	17.6, 15.5	17.6, 11.1	17.6, 9.9	17.6, 4.6	15.5, 11.1	15.5, 9.9	15.5, 4.6	11.1, 9.9	11.1, 4.6	9.9, 4.6
Mean	16.55	14.35	13.75	11.1	13.3	12.7	10.05	10.5	7.85	7.25

c.



d. 11.74 points per game

e. Yes, the mean of the sampling distribution equals the mean of the population.

f. The sampling distribution would have less variability due to the larger sample size.

6. D

7. B