

Chapter 3 – Common Types of Samples *Answer Key*

3.1 Identifying Random Sampling

Answers

No (voluntary response bias)

1. No, she may have a preference for the front, back, or middle of the book
2. Yes
3. Yes
4. No, more likely to pick up stones and beginning and end of walk
5. No, can't get a "Y" or "Z"
6. No, personal bias, and trees drop leaves at different times/rates
7. No, Google tailors results based on past searches and geographical location
8. No, people in a hardware store are not representative of the general population
9. Yes

3.2 Implementing Random Sampling

Answers

1. Simple random sample
10. Simple random sample
11. Stratified by grade and/or sex
12. Stratified by breed and/or age
13. Simple random
14. Multi-stage (Cluster, Simple random)
15. Simple random
16. Stratified by type of bulb
17. Multi-stage
18. Simple random

3.3 Stratified Sampling

Answers

1. 23.3%

1. 25.5%
19. 20
20. 68
21. No (should only have 5)
22. Yes (16.2%)
23. 1430
24. 44% (same as sample: $(62 + 48)/250$)
25. No (962)
26. 5044
27. 12%
28. Yes, using a weight range strata
29. No, unless using male and female data
30. Yes
31. Probably not, unless different grade strata is necessary
32. Yes, stratified by sport

3.4 Cluster Sampling

Answers

1. Yes, each pallet is a cluster intended to be representative of the population of light bulbs.
33. No, this is a stratified sample (every case was sampled).
34. Yes, each dealer is intended to be representative of the population of used car dealers.
35. No, this is a stratified sample.
36. No, this is a stratified sample.
37. Yes, dealers are each representative.
38. No, this is a stratified sample (each grade is not representative of the whole school).
39. Yes, schools are each representative of the population of students.
40. No, stratified (every station was sampled)
41. No, every town was sampled.

3.5 Non-Probability Sampling

Answers

1. C
42. Convenience
43. Snowball/Volunteer
44. Judgment
45. Quota
46. Simple Random
47. C
48. A
49. Convenience/Judgment
50. Convenience
51. Convenience/Random
52. As corporate personnel, they are biased in opinion regarding hiring restrictions.
53. Voluntary response bias, only the most opinionated will bother to call, and many persons with an opinion may not have been aware of the survey.
54. Many people do not have regular Internet access, or may not have seen the ad, not all people will volunteer for a survey. A true random sample must demonstrate the same opportunity for any member of the population to become part of the sample.