

Answers to Practice Problems

Chapter 1 Problems

1. Any four of the following:
identify the population and variable of interest; design the plan for collecting the data;
collect the data; summarize and present the data; draw conclusions about the population
from the same data.
2. No, this is not strong evidence. The phone-in survey (a "self-selecting" sample) is not
necessarily a representative sample of the population. Its results may be strongly biased,
and should not be used to draw conclusions about a large population.
3. a) continuous b) continuous c) discrete (if "size" of litter means
how many puppies in the litter); if "size" of litter is interpreted to mean the total weight of
the litter (not the usual interpretation here) the variable is continuous.
4. a) nominal b) ratio c) interval
5. a) ordinal b) nominal
6. a) qualitative b) quantitative c) quantitative d) qualitative
e) continuous f) discrete g) continuous
d) nominal e) ratio f) ratio g) ratio
7. a) systematic b) stratified c) random d) cluster
8. a) discrete b) continuous c) continuous d) discrete
9. a) quantitative b) qualitative c) qualitative
10. a) ordinal b) nominal c) ratio d) interval
11. a) stratified b) systematic c) cluster d) random
12. a) quantitative b) qualitative c) quantitative
13. a) continuous b) continuous c) discrete
14. a) interval b) ratio c) ratio
d) i) nominal ii) ordinal
15. any one of non-numerical, categorical, attribute
16. c)

17. a statistic is numerical quantity describing some feature of a sample.
18. a) continuous b) continuous c) discrete
19. a) ratio b) i) ordinal ii) nominal
20. a) qualitative (or categorical or attribute or non-numerical)
b) ordinal
21. a) a parameter is a numerical quantity describing some feature of a population
b) population mean; population median; population mode; population range;
population SD; population variance; there are more possibilities
22. a) nominal b) ordinal