Chapter 1: Introduction

Multiple Choice

1. "Our data set consists of 32 cases. Each case represents a different municipal police department. These departments were randomly selected from all the municipal police departments in the state of Connecticut." The unit of analysis for this study is
a. the police department
b. the police officer
c. the random sample
d. the State of Connecticut

2. Is the variable "number of college courses passed" continuous or discrete?
a. continuous
b. discrete

3. Is the variable "percent of time a married person spends with his or her spouse" continuous or discrete?
a. continuous
b. discrete

4. You are examining a variable's attributes. They represent all the possibilities without overlapping one another; they have an inherent order; and they represent a numeric scale. Furthermore, the attributes are equally wide. What level of measurement does the variable have?
a. nominal
b. ordinal
c. interval/ratio

5. The categories of a variable have ONLY the following properties: the categories are different and the categories have rank order. What level of measurement does this variable have?
a. nominal
b. ordinal
c. interval/ratio

6. The variable "cause of death" (categories: stroke, cancer, heart disease, accident, other) has what level of measurement?
a. nominal
b. ordinal
c. interval/ratio

7. The variable "age at last birthday" (attributes: 0 to 19, 20 to 39, 40 to 59, 60 to 79, 80 to 99, 100 or older) has what level of measurement?
a. nominal
b. ordinal
c. interval/ratio

8. The variable "frequency of late-arrival at class" (attributes: never, occasionally, usually, always) has what level of measurement?
a. nominal
b. ordinal
c. interval/ratio

9. The variable "years of formal schooling successfully completed" (categories: 0, 1 to 7, 8, 9 to 11, 12, 13 to 15, 16, 17 or more) has what level of measurement?
a. nominal
b. ordinal
c. interval/ratio

10. The variable "number of children" uses the attributes 0, 1, 2, 3 ... (continuing as high as is needed). This variable is
a. a continuous interval/ratio variable
b. a continuous nominal variable
c. a discrete interval/ratio variable
d. a discrete nominal variable

11. A critic charges that IQ tests are inconsistent. You take the test today and get one score but, if you retake the test tomorrow, you get a totally different score. This critic is claiming IQ tests lack

a. authenticity
b. parsimony
c. reliability
d. validity

12. A student complains that college tests don't really measure how much you know or how well you think. Teachers claim they do but the student says they really measure how fast you can work. The student is claiming college tests lack
a. authenticity
b. parsimony
c. reliability
d. validity

13. For the following pair of variables, which is the more likely DEPENDENT variable: occupation and race?
a. occupation
b. race

14. For the following pair of variables, which is the more likely INDEPENDENT variable: current residence and place of birth?
a. current residence
b. place of birth

15. In the statement "Watching violence on TV causes an increase in a person's tolerance for aggression," the independent variable is
a. parental attitude toward TV
b. person's age
c. tolerance of aggression
d. watching violence on TV

16. A researcher hypothesizes that a person's political attitudes are influenced by his or her parents' political attitudes. What is the independent variable in this hypothesis?
a. the person's political attitudes
b. the parents' political attitudes
c. whether or not the person's attitudes and the parents' attitudes agree
d. whether or not the person's attitudes and the parents' attitudes disagree

17. A researcher examines the effect of playing organized sports on a child's grades in school. Since grades are affected by many things besides involvement in organized sports, the researcher will also take into account the educational level and the socioeconomic status of the parents. What is the <u>dependent</u> variable?
a. child's grades
b. involvement in organized sports
c. parents' educational level
d. parents' socioeconomic status

18. Which of the following is NOT a requirement for demonstrating causality?
a. covariation
b. necessity
c. nonspuriousness
d. temporal sequence

Multiple-Choice Questions from Student Quizzes

1. Is the variable "number of times a person has been married" continuous or discrete?
a. continuous
b. discrete

2. Is the variable "percent of a population that is female" continuous or discrete?
a. continuous
b. discrete

3. The variable "amount of control a child has over what he or she watches on TV" (categories: no control, slight control, moderate control, complete control) has what level of measurement?
a. nominal
b. ordinal
c. interval/ratio

4. The variable "percent of a police department's officers who are female" (attributes: 0%, 1%, 2%, 3% … 99%, 100%) has what level of measurement?
a. nominal

b. ordinal
c. interval/ratio

5. The variable "favorite color" (attributes: red, blue, yellow, other) has what level of measurement?
a. nominal
b. ordinal
c. interval/ratio

6. A critic charges that IQ tests don't really measure what they claim to measure. They say they measure natural intelligence but they really measure knowledge of the dominant culture of a society. This critic is claiming IQ tests lack
a. authenticity
b. parsimony
c. reliability
d. validity

7. For the following pair of variables, which is the more likely INDEPENDENT variable: occupation and race?
a. occupation
b. race

8. For the following pair of variables, which is the more likely DEPENDENT variable: current residence and place of birth?
a. current residence
b. place of birth

9. A researcher wants to know how annual number of work days missed is affected by a worker's age. Of course, other things may also affect annual number of work days missed so the researcher will also take into account the worker's gender and number of children under the age of 18. What is the dependent variable here?
a. annual number of work days missed
b. worker's age
c. worker's gender
d. worker's number of children under age 18

10. Which of the following is a probability sampling technique?
a. purposive sampling
b. quota sampling
c. simple random sampling
d. snowball sampling

Short Answer Questions
(Note: * indicates Concept Check question from text)

*1. Who are the four groups we will be comparing in the chapter examples and practice problems?

* 2. In what roles will you be better because you understand data analysis?

* 3. What are some common units of analysis in social science research studies?

*4. What are variables and attributes?

5. What is the difference between a variable's theoretical definition and its operational definition?

*6. What are the three levels of measurement used in the text?

7. A researcher wants to measure the variable "frequency of seat belt use" at the ordinal level. Provide a set of attributes for the variable.

8. A researcher wants to measure the variable "favorite type of music" at the nominal level. Provide a set of attributes for the variable.

9. A researcher wants to measure the variable "age at last birthday" at the interval/ratio level. Provide a complete set of attributes for the variable.

*10. What are the three questions to ask about a variable's attributes in order to determine that variable's level of measurement?

*11. What is the difference between reliability and validity?

*12. What are the differences between independent, dependent, and control variables?

13. Identify the independent variable and the dependent variable in the expression "the early bird catches the worm." Be clear which is which.

14. You are interested in the effect of education on income. What are some other possible influences on income that you would want to control for?

*15. To show that a causal relationship exists, what three things are required?

*16. What is the difference between a census and a sample?

*17. What are some types of non-probability sampling and some types of probability sampling? Clearly indicate which are which.

Answer Key

Multiple Choice

1. a
2. b
3. a
4. c
5. b
6. a
7. c
8. b
9. b
10. c
11. c
12. d
13. a
14. b
15. d
16. b
17. a
18.b

Multiple-Choice Questions from Student Quizzes

1. b
2. a
3. b
4. c
5. a
6. d
7. b
8. a
9. a
10. c

Short Answer Questions

1. 1980 young adults (1980 twentysomethings), 1980 middle-age adults (1980 fiftysomethings), 2010 young adults (2010 twentysomethings), and 2010 middle-age adults (2010 fiftysomethings)
2. as a citizen, as a professional, as an administrator, and as a policy maker
3. individuals, families, communities, nations
4. Variables are dimensions on which cases differ; attributes are the different possible values cases may have on a variable.

5. A theoretical definition explains in an abstract, dictionary-like way what a researcher means by a certain variable name whereas an operational definition explains how a researcher will measure the variable.

6. nominal, ordinal, and interval/ratio

7. Answers will vary: never, occasionally, usually, always

8. Answers will vary: rap, rock & roll, pop, jazz, opera, other

9. Answers will vary: 0 to 19, 20 to 39, 40 to 59, 60 to 79, 80 to 99, 100 and older

10. Do the attributes cover all the possibilities without overlapping? Can the attributes be put in a natural order from low to high? Do the attributes form a numeric scale?

11. Reliability refers to consistency of measurement whereas validity refers to the match between the operational and theoretical definitions.

12. The independent variable influences or affects the dependent variable; the dependent variable is influenced or affected by the independent variable. Control variables are other variables which could influence the dependent variable but their effect is eliminated or separated out in order to better reveal the independent variable's effect on the dependent variable.

13. The independent variable is how early one starts; the dependent variable is how much one obtains.

14. Answers will vary: age, gender, labor force experience, occupation, hours worked per week

15. that the two variables are related (covariation), that changes in the independent variable preceded changes in the dependent variable (temporal sequence), and that a relationship between the two variables remains even after controlling for all other variables that might be creating the covariation (nonspuriousness)

16. In a census every element in a population is measured whereas in a sample only some of the elements in a population are measured.

17. Some types of non-probability sampling are convenience sampling, quota sampling, purposive sampling, and snowball sampling. Some types of probability sampling are simple random sampling, systematic random sampling, stratified random sampling, and multistage random sampling.