Statistics A Tool for Social Research and Data Analysis 11th edition Healey Test Bank

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Name:_____ Class:_____ Date:_____

Chapter 1 - Introduction

1. In social research the purpose of statistics is to
   a. prove that the research theory is correct.
   b. validate the research project design.
   c. manipulate and analyze data.
   d. ensure acceptance by the scientific community.

ANSWER: c

2. During which stage does the Wheel of Science begin for a researcher undertaking a new study?
   a. theory
   b. hypotheses
   c. observations
   d. empirical generalizations

ANSWER: b

3. In terms of the Wheel of Science, a hypothesis is derived from _____ and leads to _____.
   a. statistics, observation
   b. theory, generalizations
   c. observation, generalizations
   d. theory, observation

ANSWER: d

4. In the language of science, a variable that is thought to be causal is called
   a. an independent variable.
   b. a hypothetical variable.
   c. a primary variable.
   d. a dependent variable.

ANSWER: a

5. If people who habitually drive over the speed limit have more fatal accidents, then speed is
   a. an independent variable.
   b. the dependent variable.
   c. an effect or result variable.
   d. None of the answer choices.

ANSWER: a

6. A hypothesis states, in part, that "income increases as education increases". In this statement, income is
   a. the dependent variable.
   b. the independent variable.
   c. the hypothetical variable.
   d. the secondary variable.

ANSWER: a

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7. In terms of the "Wheel of Science", statistics are central to the research process
   a. only between the theory phase and the hypothesis phase.
   b. only between the hypothesis phase and the observation phase.
   c. only between the observation phase and the empirical generalization phase.
   d. only between the empirical generalization phase and the theory phase.

ANSWER: c

8. The problem with "push polls" is that
   a. they do not use the scientific method.
   b. they rely too much on scientific sampling.
   c. they rarely have hypotheses.
   d. they require very large samples.

ANSWER: a

9. "Ninety percent of dorm residents approved a proposed ban on smoking". This statement is an example of the use of
   a. inferential statistics.
   b. univariate descriptive statistics.
   c. multivariate descriptive statistics.
   d. inductive statistics.

ANSWER: b

10. The data reduction process of descriptive statistics
   a. allows a few meaningful numbers to summarize a large amount of data.
   b. eliminates incorrect data.
   c. simply lists all available information in order.
   d. is rarely used.

ANSWER: a

11. Measures of association are a type of descriptive statistics that allow us to
   a. investigate the causal influence of some variables on others.
   b. predict the score on one variable from the score on another.
   c. know the strength and direction of a relationship between two or more variables.
   d. All of the answer choices.

ANSWER: d

12. A researcher wants to know if there is a relationship between region of birth and political party affiliation. She should calculate a
   a. univariate descriptive statistic like the mean.
   b. qualitative measure of influence.
   c. measure of association.
   d. statistic that measures the non-relational differentiation between the two variables.

ANSWER: c

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13. Measures of association allow researchers to quantify the _____ of a relationship.
    a. strength
    b. direction
    c. strength and direction
    d. causality

ANSWER: c

14. A survey administered to a sample drawn from a local community finds that a person's political party affiliation is related to whether or not the individual favors an increase in local sales tax (the headline of a newspaper story based on this poll reads: "Republicans support proposed tax increase"). This is an example of the use of
    a. univariate descriptive statistics.
    b. inferential statistics.
    c. multivariate descriptive statistics.
    d. reductionist statistics.

ANSWER: b

15. Inferential statistics are usually based on
    a. populations.
    b. samples.
    c. individuals.
    d. groups.

ANSWER: b

16. Inferential statistics are necessary in social research because
    a. it may be impossible to find all members of a certain population.
    b. social scientists don't have the time or money to test an entire population.
    c. some of the population might not cooperate.
    d. samples are sometimes accurate representations of the population but can't always be used to generalize.

ANSWER: b

17. You ask a sample of 27 students in a particular dorm on campus about their religious beliefs and use this information to make generalizations about all students in the dorm. In this research situation
    a. the 27 students questioned are a population.
    b. the dorm is a sample.
    c. this is an example of descriptive statistics.
    d. the sample is the 27 students who were questioned.

ANSWER: d

18. Inferential statistics are usually based on:
    a. populations.
    b. samples.
    c. individuals.
    d. groups.

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ANSWER: b

19. Which of the following survey items would generate a discrete variable?
    a. How old are you?
    b. How long does it take you to commute to work?
    c. How much did you pay in taxes last year?
    d. How many cars do you own right now?

ANSWER: d

20. Which of the following questions would generate a continuous variable?
    a. How old are you?
    b. How many books do you own?
    c. How many times have you ever changed a flat tire?
    d. How many degrees do you have?

ANSWER: a

21. Which of the following is a continuous variable?
    a. Number of children
    b. Time spent watching TV
    c. Number of times you have changed residences within the last five years
    d. Number of meals you consumed yesterday

ANSWER: b

22. If a variable is discrete, it cannot be
    a. continuous.
    b. interval-ratio.
    c. observable.
    d. ordinal.

ANSWER: a

23. A nominal-level variable like marital status or gender is always
    a. discrete.
    b. continuous.
    c. ordinal.
    d. dependent.

ANSWER: a

24. Which of the following is NOT a nominal level variable?
    a. Level of education
    b. Zip code
    c. Occupation
    d. Make of auto

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ANSWER: a

25. Choose the nominal level variable below:
    a. size of family unit
    b. eye color of students in statistics class
    c. speed of travel of a jet
    d. your weight

ANSWER: b

26. In addition to saying that one case is different from another, the ordinal level of measurement allows us to
    a. put cases in general categories.
    b. measure the distance between high and low.
    c. say that one case is more or less than another.
    d. calculate meaningful averages of variables.

ANSWER: c

27. The variable socioeconomic status ranges from upper class to lower class and is an example of the
    a. nominal level of measurement.
    b. ordinal level of measurement.
    c. interval-ratio level of measurement.
    d. ratio level of measurement.

ANSWER: b

28. When using interval-ratio data, the distance between the scores is
    a. always two units.
    b. unequal.
    c. exactly defined.
    d. not always clear.

ANSWER: c

29. Which of the following can be treated as an interval-ratio variable?
    a. Social security number
    b. Zip code
    c. Age
    d. Hair color

ANSWER: c

30. Interval-ratio measurements can be all of the following except:
    a. nominal.
    b. continuous.
    c. discrete.
    d. observable.

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ANSWER: a

31. On a test, the numbers used to identify the questions would be _____ in level of measurement while the number of correct responses would be _____.

a. nominal, interval-ratio
b. interval-ratio, nominal
c. continuous, discrete
d. ordinal, nominal

ANSWER: a

32. Interval-ratio relationships can be all of the following except

a. nominal.
b. continuous.
c. discrete.
d. observable.

ANSWER: a

33. Computation of a mean (or average) is completely justified when a variable is measured at which level?

a. Interval-ratio
b. Ordinal
c. Nominal
d. Discrete

ANSWER: a

34. Which of the following mathematical operations are permitted with nominally measured variables?

a. addition
b. subtraction
c. division
d. none of these choices are correct

ANSWER: d

35. A researcher has numbered all 50 states from 1 to 50 and has calculated a mean of 17.43 for the variable "state of birth."

a. Since the variable is nominal, the mean makes no sense.
b. Since the variable is ordinal, we should treat the value of the mean with great caution.
c. The variable is interval-ratio and the mean is an appropriate and useful statistic in this case.
d. Since this variable is discrete, the mean should not be computed.

ANSWER: a

36. Summarize the research process as conceptualized in the "Wheel of Science". Identify and explain each of the stages of the research process. At what stage do statistics become central? How? What is the role of statistics in the process?

ANSWER: Not given.

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37. Some research situations are summarized below. For each situation, identify all variables and characterize them in terms of level of measurement and whether they are discrete or continuous. If applicable, identify which variables are dependent and which are independent. Explain your reasoning. What statistical application is being used?
a. A group of one hundred students are asked for their High School and college GPAs. The GPAs are then compared to see if there is any relationship between them.
b. A candidate for student body president telephones a randomly selected sample of students and asks about their opinion of the system used for course evaluation. Each student is asked if they strongly support, moderately support, or do not support the system. The candidate then uses this information to characterize the opinions of the entire student body.
c. From what regions of the nation does the college football program recruit players? A researcher ascertains the hometowns of every member of the team for the past ten years.
d. Which sport on campus has the players with the highest GPAs? The academic records of randomly selected samples of athletes from all sports are compared to answer this question.
e. Is academic achievement associated with any "background" variables? Information on a sample of students is collected. The information includes GPA, age, sex, major, years of schooling completed by both parents, and marital status of the student.
ANSWER: Not Given

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