

Chapter 1

Title: Ch01-01;FI; pg. 1

1. _____ research is research based on the actual, “objective” observation of phenomena—to achieve scientific knowledge about political phenomena.
 - a. Empirical

Title: Ch01-02;FI; pg. 3

2. _____ research is research that has a fairly direct, immediate application to a real-world situation.
 - a. Applied

Title: Ch01-03;FI; pg. 3

3. _____ research is research that is not concerned primarily with practical applications.
 - a. Pure, Theoretical, or Recreational

Title: Ch01-04;SA; pg. 3

4. What is the difference between applied research and theoretical research?
 - a. Applied research is research that has a fairly direct, immediate application to a real-world situation. Theoretical research is research that is not concerned primarily with practical applications.

Chapter 2

Title: Ch02-01;FI;pg. 31

1. Knowledge that is evaluative, value laden, and concerned with prescribing what ought to be is known as _____ knowledge.
 - a. normative

Title: Ch02-02;FI; pg. 34-35

2. Most political scientists, like scientists in other disciplines, accept _____, in which it is not necessary to explain or predict a phenomenon with 100-percent accuracy.
 - a. probabilistic explanation

Title: Ch02-03;FI; pg. 35

3. _____ dictates that when given a choice between two compelling explanations, the explanation that relies on fewer explanatory factors is the better choice.
 - a. Parsimony

Title: Ch02-04;FI; pg. 35

4. A _____ is a body of statements that systematize knowledge of, and explain, phenomena.
 - a. theory

Title: Ch02-05;FI; pg. 42

5. A valid _____ argument is one in which, if the premises are true, the conclusion must necessarily be true as well.
 - a. deductive

Title: Ch02-06;FI; pg. 43

6. _____ refers to the process of drawing an inference from a set of premises and observations.
 - a. Inductive reasoning or Induction

Title: Ch02-07;FI;pg 48

7. Practitioners of _____ argue that humans do not simply discover knowledge of the real world through a neutral process like the scientific method but rather create it.
a. constructionism

Title: Ch02-08;FI;pg 30

8. When statements or hypotheses can in principle be rejected in the face of contravening empirical evidence we can say that they are _____.
a. falsifiable

Title: Ch02-09;FI;pg 31

9. Knowledge that is concerned not with evaluation or prescription but with factual or objective determinations is known as _____.
a. nonnormative knowledge

Title: Ch02-10;FI;pg 32

10. Scientific knowledge is _____ in that both the substantive findings and research techniques are built upon the results of prior studies.
a. cumulative

Title: Ch02-11;FI; pg. 33

11. An _____ summarizes relationships between individual facts.
a. empirical generalization

Title: Ch02-12;FI; pg. 34

12. _____ is important because it can be predictive by offering systematic, reasoned anticipation of future events.
a. Explanatory knowledge

Title: Ch02-13;SA; pg. 31

13. Please explain the difference between normative and nonnormative knowledge.
a. Knowledge that is evaluative, value laden, and concerned with prescribing what ought to be is known as normative knowledge. Knowledge that is concerned not with evaluation or prescription but with factual or objective determinations is known as nonnormative knowledge. Most scientists would agree that science is (or should attempt to be) a nonnormative enterprise.

Title: Ch02-14;SA; pg. 32-33

14. Please explain the value of replication in cumulative knowledge.
a. Students should explain how both the substantive findings and research techniques in a literature are built upon the results of prior studies. Replication allows confirmation or refutation of the findings of earlier work. This improves our understanding of the concepts at issue and, ultimately, might allow for consensus.

Title: Ch02-15;SA;pg 32

15. Please explain why scientific knowledge must be transmissible.
a. The methods used in making scientific discoveries must be made explicit so that others can analyze and replicate findings. The transmissibility of scientific knowledge suggests “science is a social activity in that it takes several scientists, analyzing and criticizing each other, to produce more reliable knowledge.” To accept results, people must know what data were collected and how they were analyzed. A clear description of research procedures allows this independent evaluation. It also permits other scientists to collect the same information and test the original propositions themselves. If the original results are not replicated using the same procedures, they may be incorrect.

Title: Ch02-16;SA;pg 33-35

16. Explanation is an important component of scientific knowledge. How does explanation lead to prediction?

a. An explanation gives scientific reasons or justifications—for why a certain outcome is to be expected. In fact, many scientists consider the ultimate test of an explanation to be its usefulness in prediction.

Title: Ch02-17;SA; pg. 35-40

17. What is a theory?

a. A theory is a body of statements that systematize knowledge of, and explain, phenomena. Stated differently, theories help “organize, systematize, and coordinate existing knowledge” in a unified explanatory framework. Two crucial aspects of empirical theory are (1) that it leads to specific, testable predictions and (2) that the more observations there are to support these predictions, the more the theory is confirmed.

Title: Ch02-18;LE;pg 45-49

18. Please summarize the debate over whether political science is really a science. In your answer, please give arguments from both sides of the debate and indicate which side of the argument is correct.

a. Students should explain that those who think political science is a science point to the adherence to the scientific method. This position claims that the method is the most important part of defining a science. On the other side of the debate, there are both practical and philosophical objections to classifying political science as a science. Practical objections include the following: measurement problems, people may act in misleading ways on purpose to foil examination, data are hard to obtain, and human behavior is too complex to predict. One philosophical objection is that humans do not simply discover knowledge of the real world through a neutral process like the scientific method but rather create it. Instead of knowing reality directly in its unvarnished or pure form, our perceptions, understandings, and beliefs about many “facts” stem largely, if not entirely, from human cultural and historical experiences and practices.

Title: Ch02-19;LE; Pgs 28-40

19. In this essay, please identify and discuss the central components of scientific knowledge in political science. In your answer, please explain how each component contributes to the validity of the work.

a. Students should correctly identify and discuss the key terms from the chapter that make up scientific knowledge. These terms include empirical verification, falsifiability, nonnormative knowledge, transmissibility, the cumulative nature of science, empirical generalization, explanatory, replication, probabilistic explanation, and parsimony. Instructors can modify this question to be as specific or general as they want by indicating how many components they would like the students to include in the answer.

Title: Ch02-20;LE; pgs 42-44

20. Please explain the difference between deductive and inductive reasoning. In your answer, please define each term. Also, please provide an example of each.

a. Induction refers to the process of drawing an inference from a set of premises and observations. This type of reasoning differs from deduction because the premises do not guarantee the conclusion but instead lend support to it. An inductive argument, in other words, does not rely on formal proof but rather gives us (more or less solid) reasons for believing in the conclusion’s truthfulness. Students can include various examples. For instance, an example of inductive reasoning might be making a generalization from a sample whereas an example of deductive reasoning might be making a series of logical statements that, if true, would prove the conclusion correct. Instructors can make this into a longer question by requiring an example of each form of reasoning, or they can exclude the last part of the question to make it shorter.

Chapter 3

Title: Ch03-01;FI;pg 65

1. A phenomenon that we think will help us explain the political characteristics or behavior that interests us is called a(n) _____.

a. independent variable

Title: Ch03-02;FI; pg. 65

2. A(n) _____ variable is thought to be caused, to depend upon, or to be a function of a(n) _____ variable.

a. dependent, independent

Title: Ch03-03;FI; pg. 66

3. A variable that occurs prior to all other variables and that may affect other independent variables is called a(n) _____ variable.

a. antecedent

Title: Ch03-04;FI; pg. 66

4. A variable that occurs closer in time to the dependent variable and is itself affected by other independent variables is called a(n) _____ variable.

a. intervening

Title: Ch03-05;FI; pg. 67

5. A(n) _____ specifies the phenomena of interest; indicates which variables are independent, alternative, antecedent, intervening, and dependent; and shows which variables are thought to affect which other ones.

a. arrow diagram

Title: Ch03-06;FI; pg. 70

6. A _____ is a guess (but of an educated nature) that represents the proposed explanation for some phenomenon and that indicates how an independent variable is thought to affect, influence, or alter a dependent variable.

a. hypothesis

Title: Ch03-07;FI; pg. 77

7. The particular type of actor whose political behavior is named in a hypothesis is the _____ for the research project.

a. unit of analysis

Title: Ch03-08;FI; pg. 78

8. In a _____ analysis, researchers use data collected for one unit of analysis to make inferences about another unit of analysis.

a. cross-level

Title: Ch03-09;FI; pg. 78

9. The use of aggregate data to study the behavior of individuals is called _____.

a. ecological inference

Title: Ch03-10;FI; pg. 74

10. A _____ relationship is one in which the values of one variable increase as the values of another variable decrease.

a. negative

Title: Ch03-11;FI; pg. 74

11. A _____ relationship is one in which the values of one variable increase (or decrease) as the values of another variable increase (or decrease).

a. positive

Title: Ch03-12;FI; pg. 78

12. Using information that shows a relationship for groups to infer that the same relationship exists for individuals when no such relationship exists at the individual level is called a(n) _____.

a. ecological fallacy

Title: Ch03-13;SA; pg. 65

13. What is the difference between a variable and a constant, and why is the difference important for testing hypotheses?

a. As the word *variable* connotes, we expect the value of the concepts we identify as variables to vary or change. A concept that does not change in value is called a constant and will not make a suitable phenomenon to investigate as part of the research process. To test hypotheses, there must be variation in the independent and dependent variables to measure the reaction to change in the independent variable.

Title: Ch03-14;SA; pg. 66

14. What is the difference between an antecedent variable and an intervening variable?

a. A variable that occurs prior to all other variables and that may affect other independent variables is called an antecedent variable. A variable that occurs closer in time to the dependent variable and is itself affected by other independent variables is called an intervening variable. The roles of antecedent and intervening variables in the explanation of the dependent variable differ significantly. Antecedent variables pushes our explanatory scheme further back in time and, we hope, will lead to a more complete understanding of a particular phenomenon.

Title: Ch03-15;SA; pg. 70-77

15. Please explain how you would specify a hypothesis using a substantive example.

a. A hypothesis is an explicit statement that indicates how a researcher thinks the phenomena of interest are related. A hypothesis is a guess (but of an educated nature) that represents the proposed explanation for some phenomenon and that indicates how an independent variable is thought to affect, influence, or alter a dependent variable. Since hypotheses are proposed relationships, they may turn out to be incorrect. A good hypothesis has six characteristics: (1) It is an empirical statement, (2) it is stated as a generality, (3) it is plausible, (4) it is specific (includes direction), (5) it is stated in a manner that corresponds to the way in which the researcher intends to test it, and (6) it is testable.

Title: Ch03-16;SA; pg. 60-65

16. Please provide an example of an empirical research question and an example of a normative research question. What is the difference between the two questions?

a. An example of a normative research question is, "Should states give tax breaks to new businesses willing to locate within their borders?" This type of research question seeks an indication of what is good or of what should be done. Although scientific knowledge may be helpful in answering questions like these, it cannot provide the answers without regard for an individual's personal values or preferences. What someone ultimately likes or dislikes, values or rejects, is involved in the answers to a question like this. Alternatively, an example of an empirical research question is, "Why do some people vote in elections while others do not?" The answer to this question could make a significant contribution to the accumulation of our understanding of and knowledge about the political phenomena of voting, and is not dependent on the researcher's personal opinion or values.

Title: Ch03-17;LE; pg. 70-77

17. What is the difference between a hypothesis and a theory? In your answer, please define each and explain the role each would play in a research project.

a. A theory is a body of statements that systematize knowledge of, and explain, phenomena. Stated differently, theories help “organize, systematize, and coordinate existing knowledge” in a unified explanatory framework. Two crucial aspects of empirical theory are (1) that it leads to specific, testable predictions and (2) that the more observations there are to support these predictions, the more the theory is confirmed.

A hypothesis is an explicit statement that indicates how a researcher thinks the phenomena of interest are related. A hypothesis is a guess (but of an educated nature) that represents the proposed explanation for some phenomenon and that indicates how an independent variable is thought to affect, influence, or alter a dependent variable. Since hypotheses are proposed relationships, they may turn out to be incorrect. A good hypothesis has six characteristics: (1) It is an empirical statement, (2) it is stated as a generality, (3) it is plausible, (4) it is specific (includes direction), (5) it is stated in a manner that corresponds to the way in which the researcher intends to test it, and (6) it is testable.

Ideally, you could generate multiple hypotheses from a theory and test each of them. Finding support for more hypotheses leads to support for the theory, which cannot itself be tested directly.

Title: Ch03-18;LE; pg. 65-70

18. For this question, please provide an example that includes an arrow diagram with at least three independent variables (including an antecedent variable and an intervening variable) and one dependent variable.

a. Students’ answers may include a variety of relationships and contexts. The arrow diagram should be similar to Figure 3-2 on page 69, though much less complex.

Title: Ch03-19;LE; pg. 78-81

19. Please explain how the unit of analysis plays a part in ecological inference and ecological fallacy.

a. Sometimes researchers conduct what is called a cross-level analysis. In this type of analysis, researchers use data collected for one unit of analysis to make inferences about another unit of analysis. A frequent goal of cross-level analysis is making ecological inference, the use of aggregate data to study the behavior of individuals. Yet, if a relationship is found between group indicators or characteristics, it does not necessarily mean that a relationship exists between the characteristics for individuals in the group. Using information that shows a relationship for groups to infer that the same relationship exists for individuals when in fact no such relationship exists at the individual level is called an ecological fallacy.

Title: Ch03-20;LE; pg. 81-85

20. Why are clear definitions of concepts important in developing specific hypotheses?

a. Clear definitions are important, first and foremost, so that the knowledge we acquire from testing our hypotheses is transmissible and empirical. Because a particular discipline has some minimal level of shared consensus concerning its significant concepts, researchers can usually communicate more readily with other researchers in the same discipline than with researchers in other disciplines. Many interesting concepts that political scientists deal with are abstract and lack a completely precise, shared meaning. This hinders communication concerning research and creates uncertainty regarding the measurement of a phenomenon. Consequently a researcher must explain what is meant by the concept so that a measurement strategy may be developed and so that those reading and evaluating the research can decide if the meaning accords with their own understanding of the term.

Chapter 4

Title: Ch04-01;FI; pg. 89-90

1. An _____ definition involves deciding how to measure the presence, absence, or amount of a concept in the real world for use in an empirical investigation.
a. operational

Title: Ch04-02;FI; pg. 94-95

2. A _____ measure is one that yields the same results on repeated trials.
a. reliable

Title: Ch04-03;FI; pg. 96

3. The _____ method of measuring reliability involves measuring the same attribute more than once, and uses two different measures of the same concept rather than the same measure.
a. alternate-form

Title: Ch04-04;FI; pg. 96

4. The _____ method of measuring reliability involves two measures of the same concept, with both measures applied at the same time. The results of the two measures are then compared.
a. split-halves

Title: Ch04-05; pg. 98

5. _____ validity may be asserted when the measurement instrument appears to measure the concept it is supposed to measure.
a. Face

Title: Ch04-06;FI; pg. 98

6. _____ validity involves determining the full domain or meaning of a particular concept and then making sure that measures of all portions of this domain are included in the measurement technique.
a. Content

Title: Ch04-07;FI; pg. 98-99

7. _____ validity is demonstrated when a measure of a concept is related to a measure of another concept with which the original concept is thought to be related.
a. Construct

Title: Ch04-08;FI; pg. 99

8. _____ tests validity by relying on the similarity of outcomes of more than one measure of a concept to demonstrate the validity of the entire measurement scheme.
a. Interitem association

Title: Ch04-09;FI; pg. 105

9. A(n) _____ measurement is involved whenever the values assigned to a variable represent only different categories or classifications for that variable.
a. nominal (level)

Title: Ch04-10;FI; pg. 106

10. A(n) _____ measurement assumes that a comparison can be made on which observations have more or less of a particular attribute.
a. ordinal (level)

Title: Ch04-11;FI; pg. 106

11. A(n) _____ variable has only two categories.
a. dichotomous

Title: Ch04-12;FI; pg. 106

12. With a(n) _____ measurement the intervals between the categories or values assigned to the observations do have meaning.

a. interval (level)

Title: Ch04-013;FI; pg. 107

13. With a(n) _____ measurement the values of the categories order the categories, tell something about the intervals between the categories, and state precisely the relative amounts of the variable that the categories represent. The variable thus has the full properties of math.

a. ratio (level)

Title: Ch04-14;SA; pg. 94-102

14. Why are reliability and validity threats to the accuracy of measures? In your answer please define both terms.

a. A reliable measure is one that produces consistent results on repeated trials. A valid measure is one that measures what it is supposed to measure. Both reliability and validity are major threats to the accuracy of measures. Unreliable measures will produce different results in repeated trial; you will therefore be unsure of whether you are accurately measuring a concept in any given trial. An invalid measure consistently measures the wrong concept and is therefore useless in measuring the right concept.

Title: Ch04-15;SA; pg. 94-104

15. Are measures of reliability or validity more accurate? In other words, if given the results of reliability measures and validity measures, which set of results is most likely to reveal the truth about the measure of a concept?

a. Measures of reliability are more believable than measures of validity. Reliability is quite clear cut because the measure either produces consistent results in repeated trials or it does not. Validity is trickier because, to have a perfect measure of validity, you must be able to identify differences between the “true values” of the concept being measured and the “measured values.” This is rarely available.

Title: Ch04-16;SA; pg. 104-105

16. What is difference between measurement accuracy and measurement precision? In your answer please define both terms.

a. Measurements should be accurate and precise. Accurate measures are those that produce results that are both reliable and valid. In other words, these measures produce consistent results and measure what they are supposed to measure. Measurements should also be precise—they must contain as much information as possible about the attribute or behavior being measured. The more precise our measures, the more complete and informative can be our test of the relationships between two or more variables.

Title: Ch04-17;SA; pg. 105-110

17. What does the level of measurement tell you about a variable?

a. The level of measurement tells you about the amount of precision in your variable. It tells you how much information is included in a variable. At the bottom of the range, there is very little information in a nominal-level variable, and the amount of information increases as the level of measurement increases to ordinal, then interval, and finally ratio. The level of measurement also tells you about the mathematical properties of the variable. A higher level of measurement means that a variable has more mathematical properties and that you can use a higher order of math.

Title: Ch04-18;SA; pg. 113-115

18. What is the difference between a Likert scale and a Guttman scale?

a. A Likert scale score is calculated from the scores obtained on individual items. Each item generally

asks a respondent to indicate a degree of agreement or disagreement with the item. A Likert scale differs from an index, however, in that once the scores on each of the items are obtained, only some of the items are selected for inclusion in the calculation of the final score. Those items that allow a researcher to distinguish most readily between those scoring high on an attribute and those scoring low will be retained, and a new scale score will be calculated based only on those items.

The Guttman scale also uses a series of items to produce a scale score for respondents. Unlike the Likert scale, however, a Guttman scale presents respondents with a range of attitude choices that are increasingly difficult to agree with; that is, the items composing the scale range from those that are easy to agree with to those that are difficult to agree with. Respondents who agree with one of the “more difficult” attitude items will also generally agree with the “less difficult” ones.

Title: Ch04-19;LE;pg. 90-91

19. Why is it more difficult to provide an operational definition for an abstract concept than it is for a concrete concept? In your answer please provide an example of how you would operationalize both types of concepts.

a. Operationalizing an abstract concept is more difficult than operationalizing a concrete concept because, although concrete concepts usually have widely agreed-upon definitions with a narrow scope, abstract concepts often have different definitions. The text uses an example of liberalism as an abstract concept, and the term clearly has many different meanings depending on the context. The text defines liberalism as “believing that government ought to pursue policies that provide benefits for the less well-off.” The text then operationalizes the term with this survey question:

Some people think that the government in Washington ought to reduce the income differences between the rich and the poor, perhaps by raising the taxes of wealthy families or by giving income assistance to the poor. Others think that the government should not concern itself with reducing this income difference between the rich and the poor. Here is a card with a scale from 1 to 7. Think of a score of 1 as meaning that the government ought to reduce the income differences between rich and poor, and a score of 7 as meaning that the government should not concern itself with reducing income differences. What score between 1 and 7 comes closest to the way you feel? (CIRCLE ONE)

Others might suggest that questions regarding affirmative action, school vouchers, the death penalty, welfare benefits, and pornography could be used to measure liberalism. Thus operationalizing the concept of liberalism can be challenging. Operationalizing a concrete term like *voted* is much easier and clear cut. We can define voting as “whether or not someone voted in the 2006 presidential election.” We can operationalize the term by asking, “Did you vote in the 2006 presidential election?” Concrete terms such as *voted* are much easier to operationalize than are abstract terms such as *liberalism*.

Title: Ch04-20;LE; pg. 105-108

20. Please identify and define the four levels of measurement. Provide an example variable for each level of measurement.

a. A nominal measurement is involved whenever the values assigned to a variable represent only different categories or classifications for that variable. In such a case, no category is more or less than another category; they are simply different. An ordinal measurement assumes that a comparison can be made on which observations have more or less of a particular attribute. With an interval measurement the intervals between the categories or values assigned to the observations do have meaning. The value of a particular observation is important not just in terms of whether it is larger or smaller than another value (as in ordinal measures) but also in terms of how much larger or smaller it is. The final level of measurement is a ratio measurement. This type of measurement involves the full mathematical properties of numbers. That is, the values of the categories order the categories, tell something about the intervals between the categories, and state precisely the relative amounts of the variable that the categories represent. Students

should also include an example of each level of measurement. Alternatively, this question could be rewritten as a short answer question by removing the requirement of providing an example of each level of measurement.

Chapter 5

Title: Ch05-01;FI; pg. 122-123

1. A _____ is a plan that shows how a researcher intends to study an empirical question.
 - a. research design

Title: Ch05-02;FI; pg. 130

2. The initial measurement of variables in an experimental design is called a _____.
 - a. pre-test

Title: Ch05-03;FI; Pg. 138

3. The most basic experiment, the _____ design, involves two groups and two variables, one independent and one dependent, as before.
 - a. simple post-test

Title: Ch05-04;FI; pg. 140

4. In a _____ design, more than one experimental or control group are created so that different levels of the experimental variable can be compared.
 - a. multigroup

Title: Ch05-05;FI; pg. 155

5. In a _____ design, measurements of the independent and dependent variables are taken at approximately the same time, and the researcher does not control or manipulate the independent variable, the assignment of subjects to treatment or control groups, or the conditions under which the independent variable is experienced.
 - a. cross-sectional

Title: Ch05-06;FI; pg. 148

6. In a _____ design the researcher examines one or a few cases of a phenomenon in considerable detail, typically using several data collection methods, such as personal interviews, document analysis, and observation.
 - a. small-*N*, case study, or comparative analysis are all acceptable answers

Title: Ch05-07;FI; pg. 162

7. A _____ is a cross-sectional design that introduces a time element.
 - a. panel study

Title: Ch05-08;FI; pg. 163

8. One difficulty with panel studies is that individuals may die, move away, or decide to drop out of the study—what researchers refer to as _____.
 - a. panel mortality

Title: Ch05-09;FI; pg. 167

9. A _____ is a simplified and abstract representation of reality that can be expressed verbally, mathematically, or in some other symbolic system, and that purports to show how variables or parts of a system tie together.
 - a. formal model

Title: Ch05-10;FI; pg. 171

10. A _____ is a representation of a system by a device in order to study the system's behavior over time.

a. simulation

Title: Ch05-11;FI;

11. A group that receives or is exposed to an experimental treatment, test stimulus, or test factor is called a(n) _____ group.

a. experimental

Title: Ch05-12;SA; pg. 125

12. How can you distinguish between causal relationships and spurious relationships?

a. The research must demonstrate that the alleged cause, X , does in fact covary with the supposed effect, Y . The research must show that the cause preceded the effect: X must come before Y in time. After all, can an effect appear before its cause? Finally, the research must eliminate possible alternative causes, sometimes termed confounding factors. The research must be conducted in such a way that all possible joint causes of X and Y have been eliminated.

Title: Ch05-13;SA; 122-123

13. What are the important components to include in a research design?

a. A research design should indicate what specific theory or propositions will be tested, what units of analysis are appropriate for the tests, what measurements or observations are needed, how all this information will be collected, and which analytical and statistical procedures will be used to examine the data.

Title: Ch05-14;SA; pg. 124

14. What causes a spurious relationship?

a. A spurious relationship arises because two things, such as viewing negative ads and voting, are both affected by some third factor and thus appear to be related. Once this additional factor has been identified and controlled, the original relationship weakens or disappears altogether.

Title: Ch05-15;SA; pg. 127

15. Please identify the most important potential problem with an experimental research design that measures post-test responses one week after pre-test responses.

a. The most important potential problem is that the researcher cannot control the environment during the intervening week and thus the researcher cannot attribute all variation to the test stimulus. It is possible that extraneous factors have affected the respondents.

Title: Ch05-16;SA; pg. 132

16. How does random assignment of subjects to groups control for extraneous factors?

a. With random assignment to groups you can assume that extraneous factors will affect all groups equally and thus be canceled out.

Title: Ch05-17;SA; pg. 148

17. Why are experimental designs generally better than nonexperimental designs for making causal inference?

a. A nonexperimental design is a strategy for collecting information and data that will be used to test hypotheses and, if possible, make causal inferences. Such a design is characterized by at least one of the following: presence of a single group, lack of control over the assignment of subjects to groups, lack of control over the application of the independent variable, or inability to measure the dependent variable

before and after exposure to the independent variable occurs. Because of these factors, causal inferences made using nonexperimental designs are not as strong as those possible through the classical randomized controlled experiment.

Title: Ch05-18;LE; pg. 127-128

18. How would you design an experimental research design? Please use a substantive example in your answer.

a. Students' answers will vary based on the context of their chosen example. But the answers should reference each of the five basic characteristics discussed on pages 127–128.

1. The experimenter establishes two groups: an experimental group (there can be more than one) that receives or is exposed to an experimental treatment, or test stimulus or factor; and a control group, so named because its subjects do not undergo the experimental manipulation.
2. Equally important, the researcher randomly assigns individuals to the groups. The subjects do not get to decide which group they join. The random assignment to groups is called randomization, and it means that membership is a matter of chance, not self-selection.
3. The researcher controls the administration or introduction of the experimental treatment (the test factor)—that is, the researcher can determine when, where, and under what circumstances the experimental group is exposed to the stimulus.
4. In an experiment, the researcher establishes and measures a dependent variable—the response of interest—both before and after the stimulus is given. The measurements are often called pre- and post-experimental measures, and they indicate whether or not there has been an experimental effect. An experimental effect, as the term suggests, reflects differences between the two groups' responses to the test factor.
5. The environment of the experiment—that is, the time, location, and other physical aspects—is under the experimenter's direction. Such control means that he or she can control or exclude extraneous factors, or influences, besides the independent variable that might affect the dependent variable. If, for instance, both groups are studied at the same time of day, any differences between the control and experimental subjects cannot be attributed to temporal factors.

Title: Ch05-19;LE; pg. 133-137

19. Please discuss the advantages and disadvantages of an experimental design with respect to internal and external validity.

a. Statistical theory tells you that experiments conducted properly can lead to valid inferences about causality. In this context, however, *validity* has a particular meaning, namely, that the manipulation of the experimental or independent variable itself, and not some other variable, influenced the dependent variable. This kind of validity is known as internal validity, which means the research procedure demonstrated a true cause-and-effect relationship that was not created by spurious factors. Social scientists generally believe that a randomized controlled experiment has strong internal validity. Several things, however, can affect internal validity, including history, maturation, testing with a pre-test and post-test, selection bias, experimental mortality, instrument decay, or demand characteristics. While each of these factors represents a potential pitfall for an experiment when it comes to internal validity, the experimental design generally has very good internal validity.

But, even if you devised the most rigorous laboratory experiment possible, some readers still might not be convinced that you have found a cause-and-effect relationship that applies to the real world. The concern is a lack of external validity, the extent to which the results of an experiment can be generalized across populations, times, and settings. The most common external validity objection is that experimental results may not be found using a different population.

Title: Ch05-20;LE; pg. 142-147

20. What are the most important differences between a laboratory experiment and a field experiment?

a. In a true experiment the investigator does two things: (1) randomly assigns participants to groups (for example, experimental and control), and (2) manipulates the experimental variable. In a laboratory, researchers can generally meet these two criteria. In a field experiment, by contrast, there is no random assignment of participants to groups, but the investigator does try to manipulate one or more independent variables. The causal inferences are not as strong, but the design may be more practical.

In any experimental research design, researchers attempt to control the selection of subjects and the manipulation of the independent variable. But in the field experiment the behaviors of interest are observed in a natural setting, increasing the likelihood that extraneous factors such as historical events will intrude and affect experimental results. Most important, because the subjects are not randomized, the groups do not necessarily start out the same in all relevant respects. Although it is possible to choose a natural setting that is isolated in some respects (and thereby approximates a controlled environment), in general the researcher can only hope that the environment remains unchanged during the course of his or her experiment. Still, field experiments should not be considered totally inferior to laboratory experiments. The artificial environment of a laboratory or controlled setting may seriously affect the external validity of a study's conclusions. Something that can be demonstrated in a laboratory may have limited applicability in the real world. Therefore, a program or treatment that is effective in a controlled setting may be ineffective in a natural setting. Field experiments are more likely to produce results that reflect the real-world impact of a program or treatment than are researchers' controlled experimental manipulations.

Chapter 6

Title: Ch06-01;FI; pg. 182

1. A _____ is a systematic examination and interpretation of the literature for the purpose of informing further work on a topic.

a. literature review

Title: Ch06-02;FI; pg. 183-184

2. Newspapers, magazines, television news programs, and Internet blogs are all examples of _____ sources.

a. nonscholarly

Title: Ch06-03;FI; pg. 185

3. Books and articles written by political scientists and other academics or political practitioners are good examples of _____ sources.

a. scholarly

Title: Ch06-04;FI; pg. 196

4. An Internet search engine like Yahoo is best used to find _____ sources.

a. nonscholarly

Title: Ch06-05;FI; pg. 189

5. A search engine like JSTOR is best used to find _____ sources.
a. scholarly

Title: Ch06-06;FI; pg. 199

6. A(n) _____ is often found at the beginning of a scholarly article and will usually include a description of the contents of the article, including the research question, the theory and hypotheses, the data and methods used to test the hypotheses, and the results and conclusions.
a. abstract

Title: Ch06-07;SA; pg. 182-183

7. What is the purpose of a literature review? Why would you include one in a research paper?
a. A literature review can have many different purposes. At the bare minimum, it can be used to establish that the proposed study does not totally duplicate someone else's work. But a literature review can be used for several other, often complementary purposes. It may be used as a systematic survey of the literature to learn about what others have discovered, or it can help a researcher identify important research questions that have not been addressed fully by others. It may also be helpful in identifying the data or methods that others have used to answer specific questions, or the research strategies that have worked well or failed. Alternatively, a literature review can help narrow or focus a research topic, or efficiently guide the investigation to a fruitful conclusion. Reviewing the literature is also a critical component of motivating and developing a specific research question.

Title: Ch06-08;SA; pg. 183-187

8. How can you tell the difference between a scholarly and a nonscholarly source?
a. You can differentiate scholarly works from nonscholarly ones by looking for a few characteristics. Most important, professional articles and books published in political science or other disciplines will often go through a peer-review process. The most common peer-review standard is that a journal or book editor will send an article or book manuscript submitted for publication to one or more scholars with expertise in the topical area of the article. The review is performed in a blind fashion, in which the reviewers are not told the author's name to ensure that the review is fair. Otherwise, reviewers may be inclined to reject a piece authored by a particular author based on a personal grievance or accept a piece written by a friend. The blind process ensures that reviewers will assess only the quality of the work. The editor will rely on the peer reviewers' comments to suggest revisions of the work and assess whether or not the work makes a sufficient contribution to the literature to deserve publication. The peer-review process helps ensure that the work published in scholarly journals and books is of the best possible quality and of the most value to the discipline. It also assures the reader that, although there still may be mistakes or invalid or unreliable claims, the article or book has been vetted by one or more experts on the topic.

Alternatively, some scholarly journals and books are reviewed only by the editorial staff. Although this method provides a check on the quality of the work, it is usually not as rigorous as a blind peer-review. The type of review a journal or book publisher uses will typically be explained in the journal or on the journal's or publisher's Web site.

In addition to a peer-review process, some other indicators can differentiate scholarly from nonscholarly works. Scholarly articles and books are usually written by academics, journalists, political actors, or other political practitioners, so looking for a description of the authors is the place to start. Scholarly books are published by both university presses and commercial presses for a professional audience rather than a general audience. As such, the work will include complex analyses and be written with the assumption that the reader is familiar with the literature and method. Scholarly work will also cite other scholarly sources, which can be easily verified by scanning the works cited, footnotes, or endnotes.

Title: Ch06-09;SA; pg. 198

9. What information should you include in a citation of an electronic source?

a. You should include as much information as is available, including the author or creator of the page and the title of the article as well as the complete Internet address at which the article was found, the publication date, and the date you last accessed the page.

Title: Ch06-10;SA; pg. 200

10. Why is a literature review that focuses on concepts and ideas rather than individual articles or books usually more effective?

a. Focusing on concepts and ideas makes for a much more sophisticated literature review because it integrates previous research along conceptual and methodological lines and provides a more effective organization for the researcher to explain the base of knowledge and how the current project fits into that literature. Focusing on ideas and concepts relays to the reader how previous work fits together and how the current work builds on previous work. Focusing on individual articles or books makes it more difficult to explain how the previous work fits together, or how the current work builds on it.

Chapter 7

Title: Ch07-01;FI; pg. 210

1. A(n) _____ is any subset of units collected in some manner from a population.

a. sample

Title: Ch07-02;FI; pg. 211

2. _____ are used to approximate the corresponding population values, or parameters.

a. Sample statistics

Title: Ch07-03;FI; pg. 213

3. A(n) _____ is a sample statistic based on sample observations that estimates the numerical value of a population characteristic, or parameter.

a. estimator

Title: Ch07-04;FI; pg. 213

4. Characteristics of populations, such as averages, differences between groups, and relationships among variables that can be quantified as a number are called _____.

a. (population) parameters

Title: Ch07-05;FI; pg. 213-214

5. A(n) _____ is a single occurrence, realization, or instance of the objects or entities being studied.

a. element; unit of analysis is also acceptable

Title: Ch07-06;FI; pg. 214

6. The particular population from which a sample is drawn is called a _____.

a. sampling frame

Title: Ch07-07;FI; pg. 216

7. A _____ is an entity listed in a sampling frame.

a. sampling unit

Title: Ch07-08;FI; pg. 216

8. If a sampling frame is incomplete or inappropriate, _____ will occur.

a. sample bias, or bias

Title: Ch07-09;FI; pg. 216

9. A _____ sample is simply a sample for which each element in the total population has a known probability of being included in the sample.

a. probability

Title: Ch07-10;FI; pg. 216-217

10. A _____ sample is one in which each element in the population has an unknown probability of being selected.

a. nonprobability

Title: Ch07-11;FI; pg. 219

11. A _____ sample is one in which elements are selected from a list at predetermined intervals.

a. systematic

Title: Ch07-12;FI; pg. 220

12. A _____ sample is a probability sample in which elements sharing one or more characteristics are grouped, and elements are selected from each group in proportion to the group's representation in the total population.

a. stratified

Title: Ch07-13;FI; pg. 223

13. A _____ sample is a probability sample in which the sampling frame initially consists of groups of elements.

a. cluster

Title: Ch07-14;FI; pg. 226

14. In a _____ sample, respondents are used to identify other persons who might qualify for inclusion in the sample

a. snowball

Title: Ch07-15;FI; pg. 232

15. The mathematical term for the variation around the expected value is the _____.

a. standard error of the estimator, or standard error

Title: Ch07-16;SA; pg. 211

16. What are the advantages and disadvantages of using a sample instead of a population and vice versa?
a. A researcher's decision about whether to collect data for a population or for a sample is usually made on practical grounds. If time, money, and other costs were not considerations, it would almost always be better to collect data for a population, because you would then be sure that the observed cases accurately reflected the population characteristics of interest. However, in many if not most instances it is simply not possible or feasible to study an entire population. Imagine, for instance, the difficulty of attempting to interview every adult in even a small city. Since research is costly and time consuming, researchers must weigh the advantages and disadvantages of using a population or a sample. The advantages of taking a sample are often savings in time and money. The disadvantage is that information based on a sample is usually less accurate or more subject to error than is information collected from a population.

Title: Ch07-17;SA; pg. 216

17. Why is sample bias such a big concern?

a. If a sampling frame is incomplete or inappropriate, sample bias will occur. In such cases the sample will be unrepresentative of the population of interest, and inaccurate conclusions about the population

may be drawn.

Title: Ch07-18;SA; pg. 222

18. What is a disproportionate sample and why would you use one?

a. If you wished to analyze a population as a whole, a simple random sample might be an acceptable sample. But if you wished to investigate some questions by looking at a small stratum within a large population using a simple random sample, you would find that the number of observations from the stratum of interest is too small a sample from which to draw inferences.

To get around this problem you could sample disproportionately—by including a far larger proportion of observations from the stratum of interest than is found in the population. Then you would have enough observations to draw inferences about the population of interest.

Title: Ch07-19;SA; pg. 227-228

19. Please explain the logic behind statistical inference.

a. The major goal of statistical inference is to make supportable conjectures about the unknown characteristics of a population based on sample statistics. Statistical inference refers to using the information you know about a sample to make assertions about the information you do not know about a population.

Title: Ch07-20;SA; pg. 229-231

20. How do you determine the expected value of a population parameter?

a. If statistics are calculated for each of many, many independently and randomly chosen samples, their average or mean will equal the corresponding true, or population, quantity, no matter what the sample size.

Title: Ch07-21;SA; pg. 235-236

21. What is a sampling distribution of a sample and what can it be used for?

a. A sampling distribution of a sample statistic is a theoretical expression that describes the mean, variation, and shape of the distribution of an infinite number of occurrences of the statistic when calculated on samples of size N drawn independently and randomly from a population. It is a statistical tool for calculating the probability that sample statistics fall within certain distances of the population parameter. The sample information cannot, of course, tell you exactly where within the range of values the population parameter lies. But it allows you to make an educated guess.

Title: Ch07-22;LE; pg. 216-226

22. Please define three random and three nonrandom sampling techniques.

a. This question can be as narrow or broad as the instructor wants by changing the number of techniques to be included in the answer.

Chapter 8

Title: Ch08-01;FI; pg. 244

1. Historical institutionalism uses a _____ analysis of the written record.

a. qualitative

Title: Ch08-02;FI; pg. 244

2. A content analysis is a _____ analysis of the written record.

a. quantitative

Title: Ch08-03;FI; pg. 246

3. _____ data are data recorded and used by the researcher making the observations.
a. Primary

Title: Ch08-04;FI; pg. 246

4. _____ data are data used by a researcher who did not personally collect the data.
a. Secondary

Title: Ch08-05;FI; pg. 249

5. In _____ observation, the investigator is a regular participant in the activities or group being observed.
a. participant

Title: Ch08-06;FI; pg. 249

6. In _____ observation, those being observed are aware of the investigator's presence and intentions.
a. overt

Title: Ch08-07;FI; pg. 249

7. In _____ observation, the investigator's presence is hidden or undisclosed and his or her intentions are disguised.
a. covert

Title: Ch08-08;FI; pg. 249

8. In _____ observation, the investigator looks for and systematically records the incidence of specific behaviors.
a. structured

Title: Ch08-09;FI; pg. 249

9. In _____ observation, all behavior is considered relevant, at least at first, and recorded.
a. unstructured

Title: Ch08-10;FI; pg. 249

10. In _____ observation, the researcher observes actual behavior, with the observation more likely to occur in a natural setting than in a laboratory.
a. direct

Title: Ch08-11;FI; pg. 256

11. A(n) _____ measure is created by selective wear on some material.
a. erosion

Title: Ch08-12;FI; pg. 256

12. A(n) _____ measure is created by the deposition and accumulation of materials.
a. accretion

Title: Ch08-13;SA; pg. 244-245

13. Please provide a substantive example of how you would carry out a content analysis.
a. You may use a wide range of variables coded from written documents in a statistical analysis. One might, for example, code the content of political speeches for the number of references to specific policy issues, length, or applause lines. Likewise, one can use data from interviews and observation in both qualitative and quantitative approaches.

Title: Ch08-14;SA; pg. 245

14. What is the importance of the reactivity of a data collection method?

a. The choice of data collection method is influenced by the reactivity of a data collection method—the effect of the data collection itself on the phenomena being measured. When people know their behavior is being observed and know or can guess the purpose of the observation, they may alter their behavior. As a result, the observed behavior may be an unnatural reaction to the process of being observed. People may be reluctant, for example, to admit to an interviewer that they are anti-Semitic or have failed to vote in an election. Thus many researchers prefer unobtrusive or nonreactive measures of political behavior, because they believe that the resulting data are more natural or real.

Title: Ch08-15;SA; pg. 246

15. What is the difference between primary and secondary data?

a. Primary data are data recorded and used by the researcher making the observations. Secondary data are data used by a researcher who did not personally collect the data.

Title: Ch08-16;SA; pg. 247

16. Please define the principles of respect for persons, beneficence, and justice and explain why they are important.

a. Three ethical principles—respect for persons, beneficence, and justice—form the foundation for assessing the ethical dimensions of research involving human subjects. These principles were identified in the *Belmont Report*, a report of the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research. The principle concerning respect for persons asserts that individuals should be treated as autonomous agents and that persons with diminished capacity are entitled to protection. Beneficence refers to protecting people from harm as well as making efforts to secure their well-being. The principle of justice requires researchers to consider the distribution of the benefits and burdens of research.

Title: Ch08-17;SA; pg. 250

17. What are the advantages and disadvantages of observation in a laboratory setting?

a. Observation in a laboratory setting gives a researcher the advantage of having control over the environment of the observed. Thus the researcher may be able to use a more rigorous experimental design than is possible in a natural, uncontrolled setting. Also, observation may be easier and more convenient to record and preserve, since one-way windows, videotape machines, and other observational aids are more readily available in a laboratory.

A disadvantage of laboratory observation is that subjects usually know they are being observed and therefore may alter their behavior, raising questions about the validity of the data collected. The use of aids that allow the observer to be physically removed from the setting and laboratories that are designed to be as inviting and as natural as possible may lead subjects to behave more naturally and less self-consciously.

Title: Ch08-18;SA; pg. 250-251

18. What are the advantages and disadvantages of the participant observation technique?

a. Participant observation offers the advantages of a natural setting, the opportunity to observe people for lengthy periods of time so that interaction and changes in behavior may be studied, and a degree of accuracy or completeness impossible with documents or recall data such as that obtained in surveys. This technique allows the researcher to know and understand what happened at these events far better than reading official minutes or transcripts. However, the method has some noteworthy limitations as well.

The main problem with direct, participant observation as a method of empirical research for political scientists is that many significant instances of political behavior are not accessible for observation. For example, the privacy of the voter in the voting booth is legally protected, U.S. Supreme Court conferences

are not open to anyone but the justices themselves, political consultants and bureaucrats do not usually wish to have political scientists privy to their discussions and decisions, and most White House conversations and deliberations are guarded carefully.

Another disadvantage of participant observation is lack of control over the environment. A researcher may be unable to isolate individual factors and observe their effect on behavior. Participant observation is also limited by the small number of cases that are usually involved.

Unstructured participant observation also has been criticized as invalid and biased. A researcher may selectively perceive behaviors, noting some, ignoring others. The interpretation of behaviors may reflect the personality and culture of the observer rather than the meaning attributed to them by the observed themselves. Moreover, the presence of the observer may alter the behavior of the observed no matter how skillfully the observer attempts to become accepted as a nonthreatening part of the community.

Title: Ch08-19;SA; pg. 254-255

19. Why is note taking a critical part of field work?

a. Creating and reviewing field notes is an important part of the observational method because the observations and anecdotes recorded in field notes will constitute the data for the analysis. If note taking is incomplete, important data might be lost and conclusions might be invalid. Consequently a fieldworker should expect to spend as much time on field notes as he or she spends on observation in the field.

Title: Ch08-20;SA; pg. 258-261

20. Why does indirect observation typically raise fewer ethical concerns than direct observation?

a. Indirect observation typically raises fewer ethical issues than direct observation because the measures of individual behavior are taken after the individuals have left the scene, thus ensuring anonymity in most cases.

Chapter 9

Title: Ch09-01;FI; pg. 284

1. _____ reliability means that two or more analysts, using the same procedures and definitions, agree on the content categories applied to the material analyzed.

a. Intercoder

Title: Ch09-02;FI; pg. 271

2. The portion of the written record that is enduring and covers an extensive period of time is the _____ record.

a. running

Title: Ch09-03;FI; pg. 267

3. The portion of the written record that is not part of a regular, ongoing record-keeping enterprise is the _____ record.

a. episodic

Title: Ch09-04;SA; pg. 292

4. What are the common causes for gaps in the written record where a long series of records are temporarily, or permanently, halted?

a. Large gaps exist in many archives due to fires, losses of other types, personnel shortages that hinder record-keeping activities, and the failure of the record maker or record keeper to regard a record as worthy of preservation. We all throw out personal records every day; political entities do the same. It is difficult to know what kinds of records should be preserved, and it is often impossible for record keepers

to bear the costs of maintaining and storing voluminous amounts of material.

Another reason records may be incomplete is simply because no person or organization has assumed the responsibility for collecting or preserving them. For example, before 1930, national crime statistics were not collected by the FBI, and before the creation of the Federal Election Commission in 1971, records on campaign expenditures by candidates for the U.S. Congress were spotty and inaccurate.

Title: Ch09-05;SA; pg. 290-293

5. What is the advantage of using the written record to analyze events across time?

a. An advantage of using the written record is that sometimes the record has existed long enough to permit analyses of political phenomena over time. For example, an interrupted time series research design could be used, with observations recorded before and after an important event occurs, offering some important advantages over cross-sectional designs. Because of the importance of time, and of changes in phenomena over time, for the acquisition of causal knowledge, a data source that supports longitudinal analyses is a valuable one. The written record more readily permits longitudinal analyses than do either interview data or direct observation.

Title: Ch09-06;SA; pg. 290

6. What is the advantage of using the written record over other methods when it comes to reactivity?

a. Data from archival sources are usually nonreactive. Human subjects often consciously or unconsciously establish expectations or other relationships with investigators, which can influence their behavior in ways that might confound the results of a study. But those writing and preserving the records are frequently unaware of any future research goal or hypothesis or, for that matter, that the fruits of their labors will be used for research purposes at all. Record keeping is not always completely nonreactive, however. Record keepers are less likely to create and preserve records that are embarrassing to them, their friends, or their bosses; that reveal illegal or immoral actions; or that disclose stupidity, greed, or other unappealing attributes. Furthermore, many record-keeping agencies use paper shredders to ensure that a portion of the written record does not endure. Researchers must be aware of the possibility that the written record has been selectively preserved to serve the record keepers' own interests.

Title: Ch09-07;SA; pg. 290-291

7. What kind of research questions can the written record help answer that surveys or experiments are not likely to be very helpful with?

a. Using documents and records gives you access to subjects that may be difficult or impossible to research through direct, personal contact, because they pertain either to the past or to phenomena that are geographically distant. For example, the record keeping of the Puritans in the Massachusetts Bay Colony during the seventeenth century allowed Erikson to study their approach to crime control, and late eighteenth-century records permitted Beard to advance and test a novel interpretation of the framing of the U.S. Constitution. Neither of these studies would have been possible had there been no records available from these periods. Furthermore, although you might be able to analyze the public papers of a large number of public officials (like presidents, governors, or senators), it would be quite difficult to interview a large number of these officials, and nearly impossible to have them participate in an experiment.

Title: Ch09-08;SA; pg. 266

8. What sources are included within the written record?

a. The written record is composed of documents, reports, statistics, manuscripts, and other written, oral, or visual materials. Some written records are ongoing and cover an extensive period of time; others are more episodic. Some are produced by public organizations at taxpayers' expense; others are produced by business concerns or by private citizens. Some are carefully preserved and indexed; other records are written and forgotten.

Title: Ch09-09;SA; pg. 267

9. What is the episodic record? In your answer, please include examples of sources you would include in the episodic record.

a. Records that are not part of an ongoing, systematic record-keeping program but are produced and preserved in a more casual, personal, and accidental manner are called episodic records. Good examples are personal diaries, memoirs, manuscripts, correspondence, and autobiographies; biographical sketches and other biographical materials; the temporary records of organizations; and media of temporary existence, such as brochures, posters, and pamphlets.

Title: Ch09-10;SA; pg. 276-277

10. What are the drawbacks of relying on the episodic record to collect data?

a. To use written records, researchers must first gain access to the materials and then code and analyze them. Gaining access to the episodic record is sometimes particularly difficult. Locating suitable materials can easily be the most time-consuming aspect of the whole data collection exercise.

Title: Ch09-11;SA; pg. 271-272

11. What is the running record? In your answer, please include examples of sources you would include in the running record.

a. The running record is likely to be produced by organizations, not private citizens; it is carefully stored and easily accessed; and it is available for long periods of time. The portion of the running record that is concerned with political phenomena is extensive and growing. Governments collect and report an impressive amount of data in the form of reports and archives. In addition, you can find examples of the running record produced by interest groups, publishing houses, research institutes, and commercial concerns.

Title: Ch09-12;SA; pg. 283

12. Why is the recording unit important in a content analysis?

a. For example, from a given document, news source, or other material, the researcher may want to code (1) each word, (2) each character or actor, (3) each sentence, (4) each paragraph, or (5) each item in its entirety. To measure concern with crime in the daily newspaper, the recording unit might be the article. To measure the favorableness of news coverage of presidential campaigns in news weeklies, the recording unit might be the paragraph. And to measure the amount of attention focused on different government institutions on television network news, the recording unit might be the story. Generally, if the recording unit is too small, each case will be unlikely to possess any of the content categories. If the recording unit is too large, however, it will be difficult to measure the single category of a content variable that it possesses (in other words, the case will possess multiple values of a given content variable).

Title: Ch09-13;SA; pg. 284

13. What are the drawbacks of using a content analysis?

a. Among the drawbacks of content analysis are the time involved and the need to avoid mistakes when analyzing a large collection of written records. Suppose, for example, you wanted to see how the use of political symbols had changed over the last fifty years. You might take a sample of presidential addresses or campaign speeches and simply count the number of occurrences of certain phrases, such as "it is not the role [job, responsibility, etc.] of government to." You might then calculate and plot the proportion of such ideas over time. Doing so, though, requires that you—or, preferably, a coder or coders—read the material, look for phrases that meet the selection criteria, and make tallies. This is a time-consuming process; if a coder becomes fatigued, he or she might overlook instances that should be recorded or count phrases twice or make other mistakes.

Title: Ch09-14;LE; pg. 282-284

14. What steps would be necessary to collect data in a content analysis?

a. The first step in content analysis is deciding what sample of materials to include in the analysis. This includes selecting materials germane to the researcher's subject (in other words, choosing the appropriate sampling frame) and sampling the actual material to be analyzed from that sampling frame. The second task in any content analysis is to define the categories of content that are going to be measured. This process is in many respects the most important part of any content analysis because the researcher must measure the content in such a way that it relates to the research topic, and he or she must define this content so that the measures of it are both valid and reliable. The third task is to choose the recording unit (e.g., word, sentence, paragraph, document). Generally if the recording unit is too small, each case will be unlikely to possess any of the content categories. If the recording unit is too large, however, it will be difficult to measure the single category of a content variable that it possesses (in other words, the case will possess multiple values of a given content variable). Finally, a researcher has to devise a system of enumeration for the content being coded. The presence or absence of a given content category can be measured or the "frequency with which the category appears," or the "amount of space allotted to the category," or the "strength or intensity with which the category is represented."

This question can be expanded by asking students to provide an example of how they would execute a content analysis using a substantive example.

Title: Ch09-15;LE; pg. 290-293

15. What are the comparative advantages and disadvantages of using the running record and episodic records as sources of data?

a. There are three primary advantages to using the running record rather than the episodic record. The first is cost, in both time and money. A second, related advantage is the accessibility of the running record. Instead of searching packing crates, deteriorated ledgers, and musty storerooms, as users of the episodic record often do, users of the running record more often handle reference books, government publications, and computer printouts. A third advantage of the running record is that by definition it covers a more extensive period of time than does the episodic record. This permits longitudinal analysis and before-and-after research designs.

The running record presents problems, however. One problem is that a researcher is at the mercy of the data collection practices and procedures of the record-keeping organizations themselves. Researchers are rarely in a position to influence record-keeping practices. A trade-off often exists between ease of access and researcher influence over the measurements that are made. Some organizations—some state and local governments, for example—do not maintain records as consistently as researchers may like. Even when clear records are kept, such as election returns for mayoral contests, researchers may face a substantial task in collecting the data from individual cities, because the returns from only the largest cities are reported in various statistical compilations. Another related disadvantage of the running record is that some organizations are not willing to share their raw data with researchers. Access to public information is not always easy to obtain. Finally, it is sometimes difficult for researchers to find out exactly what some organizations' record-keeping practices are. Unless the organization publishes a description of its procedures, a researcher may not know what decisions have guided the record-keeping process.

This question can be expanded by specifying how much detail the students should include in answering the question.

Title: Ch09-16;LE; pg. 292-293

16. What are the common sources of bias in the written record and what are the potential effects on a research project?

a. For a variety of reasons, record keepers may not preserve all pertinent materials but rather selectively

save those that are the least embarrassing, controversial, or problematic. It would be surprising, for example, if political candidates, campaign consultants, and public officials saved correspondence and memoranda that cast disfavor on themselves. Obviously, whenever a person is selectively preserving portions of the written record, the accuracy of what remains is suspect. This is less of a problem when the connection between the record keeper's self-interest and the subject being examined by the researcher is minimal.

Not only may the record be incomplete or selectively preserved, but it also may be inaccurate or falsified, either inadvertently or on purpose. Memoranda or copies of letters that were never sent may be filed, events may be conveniently forgotten or misrepresented, the authorship of documents may be disguised, and the dates of written records may be altered; furthermore, the content of government reports may tell more about political interests than empirical facts. For example, Soviet and East European governments apparently released exaggerated reports of their economic performance for many years; scholars (and investigators) attempting to reconstruct the actions in the Watergate episode have been hampered by alterations of the record by those worried about the legality of their role in it. Often, historical interpretations rest upon who said or did what, and when. To the extent that falsifications of the written record lead to erroneous conclusions, the problem of record-keeping accuracy can bias the results of a research project.

Chapter 10

Title: Ch10-01;FI; pg. 306

1. A _____ rate refers to the proportion of persons initially contacted who actually participate.
 - a. response

Title: Ch10-02;FI; pg. 315

2. _____ is the extent to which responses provide accurate and complete information.
 - a. Response quality

Title: Ch10-03;FI; pg. 316

3. _____ bias occurs when the interviewer influences the respondent's answers.
 - a. Interviewer

Title: Ch10-04;FI; pg. 322

4. A _____ question is really two questions in one.
 - a. double-barreled

Title: Ch10-05;FI; pg. 322

5. A(n) _____ question is one that contains a concept that is not defined clearly.
 - a. ambiguous

Title: Ch10-06;FI; pg. 323

6. A _____ question encourages respondents to choose a particular response because the question indicates that the researcher expects it.
 - a. leading, or reactive

Title: Ch10-07;FI; pg. 323

7. A _____ poll is a poll in which interviewers, supposedly representing a research organization, feed respondents (often) false and damaging information about a candidate or cause under the guise of asking a question.
 - a. push

Title: Ch10-08;FI; pg. 324-325

8. A _____ question provides respondents with a list of responses from which to choose.
a. closed-ended

Title: Ch10-09;FI; pg. 324-325

9. In a(n) _____ question, the respondent is not provided with any answers from which to choose.
a. open-ended

Title: Ch10-10;FI; pg. 326

10. In a _____ question the respondent is asked to agree or disagree with a single substantive statement.
a. single-sided

Title: Ch10-11;FI; pg. 298

11. _____ is the act of asking individuals a series of questions and recording their responses.
a. Interviewing

Title: Ch10-12;FI; pg. 331

12. The term _____ refers to the physical layout and packaging of the questionnaire.
a. questionnaire design

Title: Ch10-13;LE; pg. 325

13. What is the difference between an open-ended questions and a closed-ended question? What are the advantages and disadvantages of using each?
a. A closed-ended question provides respondents with a list of responses from which to choose. In an open-ended question, the respondent is not provided with any answers from which to choose.

The main advantage of a closed-ended question is that it is easy to answer and takes little time. Also, the answers can be precoded (that is, assigned a number) and the code then easily transferred from the questionnaire to a computer. Another advantage is that answers are easy to compare, since all responses fall into a fixed number of predetermined categories. These advantages aid in the quick statistical analysis of data. In open-ended questions, by contrast, the researcher must read each answer, decide which answers are equivalent, decide how many categories or different types of answers to code, and assign codes before the data can be computerized.

Another advantage of closed-ended questions over open-ended ones is that respondents are usually willing to respond on personal or sensitive topics (for example, income, age, frequency of sexual activity, or political views) by choosing a category rather than stating the actual answer. This is especially true if the answer categories include ranges. Finally, closed-ended questions may help clarify the question for the respondent, thus avoiding misinterpretations of the question and unusable answers for the researcher.

Critics of closed-ended questions charge that they force a respondent to choose an answer category that may not accurately represent his or her position. Therefore, the response has less meaning and is less useful to the researcher. Also, closed-ended questions often are phrased so that a respondent must choose between two alternatives or state which one is preferred. This may result in an oversimplified and distorted picture of public opinion. However, a closed-ended question allowing respondents to pick more than one response (for example, with instructions to choose all responses that apply) may be more appropriate in some situations. The information produced by such a question indicates which choices are acceptable to a majority of respondents. In fashioning a policy that is acceptable to most people, policymakers may find this knowledge much more useful than simply knowing which alternative a

respondent prefers.

Unstructured, free-response questions allow respondents to state what they know and think. They are not forced to choose between fixed responses that do not apply. Open-ended questions allow respondents to tell the researcher how they define a complex issue or concept. Sometimes researchers are unable to specify in advance the likely responses to a question. In this situation, an open-ended question is appropriate. Open-ended questions are also appropriate if the researcher is trying to test the knowledge of respondents. Paradoxically, a disadvantage of the open-ended question is that respondents may respond too much or too little. Some may reply at great length about an issue—a time-consuming and costly problem for the researcher. If open-ended questions are included on mail surveys, some respondents with poor writing skills may not answer. This may bias responses. Thus the use of open-ended questions depends on the type of survey. Another problem is that interviewers may err in recording a respondent's answer. Recording answers verbatim is tedious. Furthermore, unstructured answers may be difficult to code, interpretations of answers may vary (affecting the reliability of data), and processing answers may become time consuming and costly.

Title: Ch10-14;SA; pg. 319

14. Why and how would you use the randomized response technique? Please provide an example in your answer.

a. Sometimes you may want to learn about sensitive topics like whether a respondent has had an abortion or uses illicit drugs. Often, respondents will be uncomfortable answering such questions and refuse to answer, or lie—leading to bias. One approach to the problem of obtaining accurate answers to sensitive questions is the randomized response technique (RRT). The RRT allows respondents to answer these kinds of sensitive questions truthfully without the interviewer's knowing the question being answered. For example, the interviewer gives the respondent a card with two questions, one sensitive and one not sensitive. A device such as a coin or a box with two colors of beads is used to randomly determine which question the respondent will answer. If a coin is used, the respondent will be instructed to answer one question if the result is a heads and the other if tails shows up. The respondent flips the coin and, without showing the interviewer the outcome of the toss, answers the appropriate question. One can then use probability theory to estimate the distribution of sensitive responses.

Title: Ch10-15;SA; pg. 315-316

15. How can the interviewer-respondent exchange bias survey results?

a. Interviewer bias occurs when the interviewer influences the respondent's answers. The interviewer may give a respondent the impression that certain answers are expected or are correct. For example, interviewers who anticipate difficulties in persuading respondents to respond or to report sensitive behavior have been found to obtain lower response and reporting rates. The age, sex, or race of the interviewer may affect the respondent's willingness to give honest answers. For example, on racial questions, respondents interviewed by a member of another race have been found to be more deferential to the interviewer (that is, trying harder not to cause offense) than those interviewed by a member of their own race. Education also has an impact on race-of-interviewer effects: less-educated blacks are more deferential than better-educated blacks, and better-educated whites are more deferential than less-educated whites.

Title: Ch10-16;SA; pg. 309-310

16. Why is it important to make a concerted effort to complete a survey with each of the respondents selected for inclusion in a sample?

a. Substituting for a respondent who refuses to complete a survey may bias results of the survey if some common factor is shared by those who refuse to cooperate. The amount of bias introduced by nonresponses due to refusal or unavailability varies, depending on the purpose of the study and the explanatory factors stressed by the research.

Title: Ch10-17;SA; pg. 309-310

17. What is meant by the term sample-population congruence, and why is it important in survey research?
a. Sample-population congruence, which refers to how well the sample subjects represent the population, is always a major concern. Here we are speaking of how well the individuals in a sample represent the population from which they are presumably drawn. Bias can enter either through the initial selection of respondents or through incomplete responses of those who agree to take part in the study. In either case a mismatch exists between the sample and the population of interest. These problems arise to varying degrees in every type of survey.

Title: Ch10-18;SA; pg. 299-301

18. Why are validity and reliability important concepts to consider when designing survey questions?
a. Survey and interview methods produce only indirect measures of attitudes and behavior, measurement problems. In particular, what is recorded on a piece of paper or an audiotape is usually not an exact, error-free measure of an object. This is particularly true when the objects are attitudes, beliefs, or self-described behavior. Random errors arise by chance or happenstance and (it is hoped) cancel one another out. A systematic error, by contrast, results when a measuring device consistently over- or underestimates a true value, as when a scale always reads two pounds less than a person's real weight. The goal of any research design, of course, is to minimize these errors. Stated differently, our investigative procedures have to ensure validity and reliability. A valid measure produces an accurate or true picture of an object, whereas a reliable one gives consistent results (measurements) across time and users.

Title: Ch10-19;SA; pg. 299

19. What is the difference between random and systematic error?
a. Errors may be random or systematic. Random errors arise by chance or happenstance and (it is hoped) cancel one another out. A systematic error, by contrast, results when a measuring device consistently over- or underestimates a true value, as when a scale always reads two pounds less than a person's real weight.

Title: Ch10-20;SA; pg. 306-307

20. Why is the response rate on surveys important for statistical inference?
a. Survey research methods offer good inferential power with known populations, but when a survey falls short of full participation, the inferential value of the method is threatened. If the response rate is low, either because individuals cannot be reached or because they refuse to participate, the researcher's ability to make statistical inferences for the population being studied may be limited. Also, those who do participate may differ systematically from those who do not, creating other biases. Increasing the size of the survey sample to compensate for low response rates may only increase costs without alleviating the problem.

Title: Ch10-21;SA; pg. 308

21. Why is it more likely that a respondent will complete a personal interview than a telephone survey?
a. Because the respondent lacks any visual cues about the caller, there is uncertainty and distrust. Unless the caller can quickly alleviate the respondent's discomfort, the respondent may refuse to finish the interview. For this reason telephone interviews are more likely to be terminated before completion than are personal interviews. It is harder to ask an interviewer to leave than it is simply to hang up the phone.

Title: Ch10-22;SA; pg. 307-308

22. What administrative advantages are there for using a telephone survey instead of a survey relying on personal interviews?
a. Compared with personal interviewing, telephone surveys have several administrative advantages. Despite the cost of long-distance calls, centralization of survey administration is advantageous. Training

of telephone interviews may be easier. The real advantages to telephone surveys begin after interviewing starts. Greater supervision of interviewers and prompt feedback to them is possible. Also, callers can easily inform researchers of any problems they encounter with the survey. Coders can begin coding data immediately. If they discover any errors, they can inform interviewers before a large problem emerges. With proper facilities, interviewers may be able to code respondents' answers directly on computer terminals. In some cases, the whole interview schedule may be computerized, with questions and responses displayed on a screen in front of the interviewer. The development of computer and telephone technologies gives telephone surveys a significant time advantage over personal interviews. Telephone surveys are also particularly good for situations in which statistically rare subgroups must be reached or estimated. Where large samples are required, telephone surveys are one-half to one-third the cost of personal interviews. Telephone surveys are also best if the research must be conducted in a short period of time; personal surveys are not as fast.

Title: Ch10-23;SA; pg. 303

23. What are the typical costs associated with designing and administering a survey research design?

a. Any type of survey research takes time and incurs at least some expenses for materials. Among the factors determining survey costs are the amount of professional time required for questionnaire design, the length of the questionnaire, the geographical dispersion of the sample, call-back procedures, respondent selection rules, and availability of trained staff. Personal interviews are the most expensive to conduct because interviewers must, after being trained, locate and contact subjects, a frequently time-consuming process. For example, some well-established surveys ask interviewers to visit a household and, if the designated subject is not available, make one or more call-backs. National in-person surveys also incur greater administrative costs. Regional supervisory personnel must be hired and survey instruments sent back and forth between the researcher and interviewers. Mail surveys are less expensive but require postage and materials. Electronic surveys (for example, e-mail or Internet) do not necessitate interviewer time but must still be set up by individuals with technical skills. Although mail surveys are thought to be less expensive than telephone polls, Fowler argues that the cost of properly executed mail surveys is likely to be similar to that of phone surveys. Thus, when deciding among personal interviews, telephone interviews, and mail surveys, researchers must consider cost and administrative issues.

Title: Ch10-24;SA; pg. 303

24. Please describe the phone survey in terms of overall cost, potential completion rate, sample-population congruence, questionnaire length, and data processing costs.

a. See Table 10-1. This question can be changed to address any of the survey design types.

Title: Ch10-25;LE; pg. 303

25. Please compare two types of survey (face to face, phone, mail, Internet, group, drop-off) in terms of overall cost, potential completion rate, sample-population congruence, questionnaire length, and data processing costs.

a. See Table 10-1. The comprehensiveness of this question can be easily changed by the instructor to include more or less detail and more or fewer types of surveys.

Chapter 11

Title: Ch11-01;FI; pg. 355

1. An empirical _____ distribution is a table that shows the number of observations having each value of a variable.

a. frequency

Title: Ch11-02;FI; pg. 355

2. By transforming the raw frequency into a proportion or percentage, you get a _____ frequency.

a. relative

Title: Ch11-03;FI; pg. 361

3. A _____ statistic is a number that, because of its definition and formula, describes certain characteristics or properties of a batch of numbers.

a. descriptive

Title: Ch11-04;FI; pg. 361

4. A measure of _____ locates the middle or center of a distribution and describes a typical case.

a. central tendency

Title: Ch11-05;FI; pg. 365

5. The _____ is a value that divides a distribution in half.

a. median

Title: Ch11-06;FI; pg. 371

6. By subtracting the minimum value from the maximum value in a batch of numbers, you can calculate the _____.

a. range

Title: Ch11-07;FI; pg. 375

7. The _____ is the average or mean of squared deviations, or the average of all the squared differences between each score and the mean.

a. variance

Title: Ch11-08;FI; pg. 375

8. The _____ is the square root of the variance.

a. standard deviation

Title: Ch11-09;FI; pg. 387

9. A _____ is a type of bar graph in which the height and area of the bars are proportional to the frequencies in each category of a nominal variable or in intervals of a continuous variable.

a. histogram

Title: Ch11-10;FI; pg. 399

10. A _____ is the incorrect or mistaken rejection of a true null hypothesis.

a. type I error

Title: Ch11-11;FI; pg. 399

11. A _____ is the failure to reject of a false null hypothesis.

a. type II error

Title: Ch11-12;SA; pg. 411

12. What is the z critical value when using a .05 p value?

a. 1.96

Title: Ch11-13;SA; pg. 355

13. What is the difference between a proportion and a percentage?

a. A proportion—the ratio of a part to a whole—is calculated by dividing the number of observations (fk) having a specific property, or individuals who gave a particular response, by the total number of

observations (N). A percentage, or “parts per 100,” is found by multiplying a proportion by 100 or equivalently moving the decimal two places to the right.

Title: Ch11-14;SA; pg. 362-368

14. Please identify and define three measures of central tendency.

a. The mean is the average value in a batch of numbers, calculated by dividing the sum by the number of observations. The median is the middle observation in an ordered list of numbers. The mode is the most frequently observed value in a batch of numbers. The mean, median, and mode all describe the typical case.

Title: Ch11-15;SA; pg. 362-368

15. Why is the mean vulnerable to outliers whereas the median and mode are not?

a. The mean is calculated by summing all values and dividing by the total number of observations. Thus, the larger or smaller an outlier, the more the mean will increase or decrease. The median and mode, however, are not vulnerable to outliers because an outlier, by definition, is found at the extreme end of a distribution, not in the middle, and is not the most frequently observed value.

Title: Ch11-16;SA; pg. 364

16. Why is the trimmed mean known as a resistant measure?

a. The trimmed mean is resistant to outliers because the trimmed mean is calculated by dropping values from the high and low ends of an ordered list of values. Thus it is resistant because outliers are omitted from the calculation.

Title: Ch11-17;SA; pg. 374

17. What is the sum of the deviations from the mean? How do you know your answer will always be correct regardless of the data used?

a. The sum of the deviations from the mean in any set of data will always be zero because the mean is nothing more than the average of all of the values in the data set. Therefore, there will always be an equal amount of deviation above and below the mean.

Title: Ch11-18;SA; pg. 377

18. Please explain the features of the normal distribution and include a labeled figure.

a. For the figure see Figure 11-4. What we see there is a “bell-shaped” distribution with the following features:

- The bulk of observations lie in the center, where there is a single peak.
- More specifically, in a normal distribution, half (50 percent) of the observations lie *above* the mean and half lie *below* it.
- The mean, median, and mode have the same numerical values.
- Fewer and fewer observations fall in the tails of the distribution.
- The spread of the distribution is symmetric: one side is the mirror image of the other.

If data have such a distribution, the frequency or proportion of cases lying between any two values of the variable can be described by “distances” between the mean and standard deviations. Approximately 68 percent of the observations are between plus and minus one standard deviation of the mean.

Approximately 95 percent of the cases will fall between plus and minus two standard deviations of the mean. Almost all of the data will be between plus and minus three standard deviations of the mean.

Title: Ch11-19;SA; pg. 395

19. What is the difference between hypothesis testing and point estimation?

a. Hypothesis testing. Many empirical claims can be translated into specific statements about a population that can be confirmed or disconfirmed with the aid of probability theory. To take a simple example, the assertion that there is *no* gender gap in American politics can be restated as “Hypothesis: men’s mean liberalism scores equal women’s mean liberalism scores.” One way to test this hypothesis is by measuring the difference between the mean responses among men and women. If the difference is in the expected direction, and is statistically significant, you can accept the hypothesis.

Point and interval estimation. The goal here is to estimate unknown population parameters from samples and to surround those estimates with confidence intervals. Confidence intervals suggest the estimate’s reliability or precision.

Title: Ch11-20;SA; pg. 399

20. What is the difference between a type I error and a type II error?

a. A type I error is made when you mistakenly reject a true null hypothesis. A type II error is made when you mistakenly accept a false null hypothesis. A type I error is more problematic than a type II error.

Title: Ch11-21;SA; pg. 407

21. When using a t test, how do you determine if you reject the null hypothesis?

a. To reject a null hypothesis, the calculated t value must be larger than a critical t value, based on the t table. We choose a critical t value by selecting a one- or two-tailed test, calculating the degrees of freedom, and selecting a probability level (usually .05 or .01). If the absolute value of the observed test statistic is greater than or equal to the critical value, reject the null hypothesis; if the observed t is smaller than the critical value, do not reject it.

Title: Ch11-22;SA; pg. 406-413

22. What is the difference between the calculation of a t score and a z score for hypothesis testing?

a. A t score is used with a small sample and uses a sample standard deviation in the denominator. A z score is used with population data or can be used with a large enough sample and uses a population standard deviation in the denominator.

Title: Ch11-23;SA; pg. 418

23. If you were to calculate a confidence interval using a confidence level of .9 and then calculated a second confidence interval using the same data but changed the confidence level to .95, would the interval be more narrow or wider? What is the reason?

a. Increasing the confidence level from .9 to .95 would make the confidence interval wider. If you want a higher degree of certainty, you need to expand the interval to find the higher degree of certainty.

Chapter 12

Title: Ch12-01;FI; pg. 430

1. A measure of _____ describes in a single number or coefficient the kind and strength of relationship between the values of two variables.

a. association

Title: Ch12-02;FI; pg. 431

2. Bounded measures of association like Pearson’s r vary between _____ and _____.

a. -1 and 1 , or 1 and -1

Title: Ch12-03;FI; pg. 432

3. A _____ displays the joint distribution of values of the variables by listing the categories for one of the variables along one side and the categories for the other variable across the top.

a. cross-tabulation

Title: Ch12-04;FI; pg. 439

4. Kendall's tau b, Kendall's tau c, Somer's d, and Goodman and Kruskal's gamma are all measures of _____.

a. association

Title: Ch12-05;FI; pg. 456

5. The determination of statistical significance for a cross-tabulation requires the calculation of a statistic called a _____.

a. chi-square

Title: Ch12-06;FI; pg. 480

6. A _____ plot is a graphic that simultaneously displays the scatterplots of each pair of variables.

a. matrix

Title: Ch12-07;FI; pg. 484

7. The regression equation is _____.

a. $Y = a + bX$

Title: Ch12-08;FI; pg. 485

8. In the regression equation, $Y = a + bX$, the "a" is defined as the _____.

a. y intercept

Title: Ch12-09;FI; pg. 485

9. In the regression equation, $Y = a + bX$, the "b" is defined as the _____.

a. slope, or slope of the line

Title: Ch12-10;FI; pg. 486

10. The regression coefficient tells how much _____ changes if _____ changes by one unit.

a. Y , X ; or the dependent variable, the independent variable

Title: Ch12-11;FI; pg. 487

11. _____ is a statistic that indicates how well a regression model fits data.

a. r squared, or eta squared

Title: Ch12-12;FI; pg. 493

12. You can create a _____ variable by subtracting the mean from each value and dividing the remainder by the standard deviation.

a. standardized

Title: Ch12-13;SA; pg. 430

13. What is the difference between a positive and a negative relationship?

a. In a positive relationship, X and Y vary together and in the same direction, so that as X increases, so does Y . In a negative relationship, X and Y vary together but in opposite directions, so that as X increases, Y decreases.

Title: Ch12-14;SA; pg. 438

14. What is a monotonic relationship?

a. On a graph, X and Y values drift upward from left to right in a positive relationship and downward from

left to right in a negative relationship. A line drawn through the graph will be curved but never goes down once it is on its way up or, alternatively, it never goes up once it is on its way down.

Title: Ch12-15;SA; pg. 478

15. What is a linear relationship?

a. In a negative linear relationship, the plotted values of Y and X fall on a straight line that slopes downward from left to right. In a positive linear relationship, the plotted values of Y and X fall on a straight line that slopes upward from left to right.

Title: Ch12-16;SA; pg. 439

16. Please define concordant and discordant pairs and ties.

a. A concordant pair is a pair in which one individual is higher on both variables than the other case. A discordant pair is one in which one case is lower on one of the variables but higher on the other. A tied pair is a pair in which both observations have the same value on one or both variables.

Title: Ch12-17;SA; pg. 456-458

17. How would you establish statistical significance with a chi-square test?

a. To find a critical value it is necessary first to find the degrees of freedom, which is easily done by multiplying the number of columns in the table minus one times the number of rows in a table minus one. You also need a level of significance, usually .05 or .01.

Then you look in a chi-square table to determine the value that marks the upper 1 percent (the .01 level) or the upper 5 percent (the .05 level) of the distribution. If the observed chi-square is greater than or equal to the critical chi-square in the table, you will reject the hypothesis of statistical independence. Otherwise, you will not reject it.

Title: Ch12-18;SA; pg. 462-475

18. Please explain in your own words how ANOVA can be used to test hypotheses.

a. In a nutshell, ANOVA, as analysis of variance is known, is a technique for comparing means of a quantitative variable between categories or groups formed by a categorical variable. Suppose, for example, that you have a variable (X) with three categories, A, B, and C, and a sample of observations within each of those categories. For each observation there is a measurement on a quantitative dependent variable (Y). Thus, within every category or group, you can find the mean of Y . ANOVA digs into such data to discover (1) if there are any differences among the means, (2) which specific means differ and by how much, and (3) assuming the observations are sampled from a population, whether the observed differences could have arisen by chance or whether they reflect real variation among the categories or groups in X .

Title: Ch12-19;SA; pg. 467-477

19. When the difference of the means is larger, or smaller, what are the implications for tests of statistical significance?

a. You can calculate the difference between two means by subtracting the mean of one variable (say, a pre-test) from another (say, a post-test). This difference is the effect size. The question is whether the difference between the means is large enough for you to conclude that exposure to some treatment is causing a meaningful difference in the means. You can interpret the difference of the means as follows: The larger the difference of the means, the more likely that the difference is not due to chance and is instead due to a relationship between the independent and dependent variables. In other words, if the difference between the means is quite small, it is likely that the intervening treatment did not really have an effect. It is essential, then, to establish a way to determine when the difference of the means is large enough to conclude that there was a meaningful effect.

Title: Ch12-20;SA; pg. 477

20. How does a regression give us the “best fit” line to summarize the relationship between two variables?
a. In regression, an equation ($Y = a + bX$) is found in such a way that its graph is a line that minimizes the squared vertical distances between the data points and the line drawn. Regression analysis uses a mathematical procedure that finds the single line that minimizes the squared distances from the line.

Title: Ch12-21;SA; pg. 477-497

21. How would you interpret the effect of X on Y given this regression equation: $Y = 3.2 + 6.3X$?
a. A one-unit change in X causes a 6.3 unit change in Y .

Chapter 13

Title: Ch13-01;FI; pg. 503

1. _____ analysis investigates the interrelationships of more than two variables.
a. Multivariate

Title: Ch13-02;FI; pg. 507

2. A _____ relationship is one in which the association between two variables is caused by a third.
a. spurious

Title: Ch13-03;FI; pg. 509

3. _____ is the specification of the conditions under which X and Y are and are not related.
a. Explication

Title: Ch13-04;FI; pg. 519

4. A _____ variable is a hypothetical index that has just two values: 0 for the presence (or absence) of a factor and 1 for its absence (or presence).
a. dummy

Title: Ch13-05;FI; pg. 521

5. A regression coefficient calculated from standardized variables is called a _____ regression coefficient or, sometimes, a beta weight. Under certain restricted circumstances, this coefficient might indicate the relative importance of each independent variable in explaining the variation in the dependent variable when controlling for all the other variables.
a. standardized

Title: Ch13-06;FI; pg. 524

6. _____ is the ratio of the explained variation in the dependent variable to the total variation in the dependent variable; hence, it equals the proportion of the variance in the dependent variable that may be explained by the set of independent variables.
a. R -squared, or multiple correlation coefficient, or multiple r , or coefficient of determination

Title: Ch13-07;FI; pg. 524

7. R -squared is measured on a scale from ____ to ____.
a. 0, 1

Title: Ch13-08;FI; pg. 528

8. In a _____ model, the expected value of the binary dependent variable or (what is the same thing) the probability that Y equals 1 is a linear function of the independent variables.
a. linear probability

Title: Ch13-09;FI; pg. 530

9. _____ regression is a nonlinear model in which the log odds of one response as opposed to another is the dependent variable.

a. Logistic

Title: Ch13-10;FI; pg. 535

10. To measure goodness of fit with a logistic regression, we commonly use _____ *R*-squared instead of *R*-squared.

a. pseudo

Title: Ch13-1;SA; pg. 504

11. What is meant by “controlling” for a third variable in a multivariate analysis?

a. Political scientists use multivariate techniques to *control for* the effects of a third variable. This means that the impact of other variables is removed or taken into account when measuring the strength and direction of the relationship between an independent and a dependent variable. Generally, the impact of a third variable may be controlled either experimentally or statistically. Experimental control is introduced by randomly assigning the subjects in a study to experimental and control groups to control for other factors and then limiting exposure to the experimental stimulus to just the experimental group. Statistical control, the procedure used more frequently by political scientists, involves measuring each observation’s values on the control variables and using these measures to make comparisons between observations.

Title: Ch13-12;SA; pg. 504

12. What is the difference between experimental control and statistical control?

a. Experimental control is introduced by randomly assigning the subjects in a study to experimental and control groups to control for other factors and then limiting exposure to the experimental stimulus to just the experimental group. Statistical control, the procedure used more frequently by political scientists, involves measuring each observation’s values on the control variables and using these measures to make comparisons between observations.

Title: Ch13-13;SA; pg. 506

13. Please explain how you can control for the effects of a third variable in a multivariate cross-tabulation by grouping.

a. In a multivariate cross-tabulation, you control for a third variable by holding it constant. In effect, you control by grouping, that is, you group the observations according to their values on the third variable and then observe the original relationship within each of these groups. In the text example, each group consists of people with more or less the same income. If a relationship between opinions on spending and voting in these groups remains, it cannot be due to income.

Title: Ch13-14;SA; pg. 509

14. How do you calculate the degrees of freedom from a table for use in measuring association with a chi-square?

a. The number of degrees of freedom in a table is *always* $(R - 1)(C - 1)$, where *R* and *C* are the numbers of rows and columns, respectively.

Title: Ch13-15;SA; pg. 515

15. What is the advantage of using a multiple regression to measure the relationships between three independent variables and a dependent variable instead of using three bivariate regressions to measure the relationships between each of the three independent variables and the dependent variable?

a. As the name implies, multiple regression simply extends bivariate procedures to include more than one independent variable. The main difference—and what needs to be stressed—is that a multiple regression

coefficient indicates how much a one-unit change in an independent variable changes the dependent variable *when all other variables in the model have been held constant or controlled*. The controlling is done by mathematical manipulation, not by literally grouping subjects together. If we used the three bivariate regressions instead, we would not be able to assess the effect of each of the three independent variables with the other two held constant.

Title: Ch13-16;SA; pg. 516

16. Why is each β term in a multiple regression equation called a partial regression coefficient?
a. As in simple regression, the β s indicate how much Y changes for a one-unit change in the independent variables when the other variables are held constant. Each β is called a partial regression coefficient because it indicates the relationship between a particular X and the Y after all the other independent variables have been “partialled out” or simultaneously controlled.

Title: Ch13-17;SA; pg. 520

17. How can you use a nominal-level variable like region (East, West, South, Midwest) in a regression analysis? How would you manipulate the variable for inclusion in the regression equation?

a. If you had a categorical variable with more than two categories, you could create separate dummy variables for each category. Suppose, for instance, the states had been divided into four regions: East, South, Midwest, and West. The four dummy variables that represent this “meta” variable would be as follows:

- $X_{East} = 1$ if East;
0 otherwise (i.e., not eastern state)
- $X_{South} = 1$ if South;
0 otherwise
- $X_{Midwest} = 1$ if Midwest;
0 otherwise
- $X_{West} = 1$ if West;
0 otherwise.

By coding each region as its own dummy variable, you would be able to convert a nonmathematical nominal-level variable into four numerical variables that could be used in a regression.

Title: Ch13-18;SA; pg. 523

18. How does standardizing a variable affect the interpretation of the variable in a regression?
a. Transforming variables by standardization just changes their measurement scales. It does not alter their interrelationships. Interpretation is therefore not affected by standardization.

Title: Ch13-19;SA; pg. 526

19. How would you determine the number of degrees of freedom for use with a t test for a multiple regression?

a. You would calculate the degrees of freedom using the formula $N-K-1$, where N is the number of observations, and K is the number of independent variables.

Title: Ch13-20;LE; pg. 514-526

20. Please interpret the following multiple regression output table by indicating how you would interpret all of the statistics and coefficients discussed in class. Make sure you interpret the relationship between each independent variable and the dependent variable and assess statistical significance.

a. Instructors should provide students with a regression output table with statistics and coefficients that were covered in the course.