Test Questions

About These Test Questions

This file contains draft questions for the chapters in *Essential Statistics for Public Managers and Policy Analysts.* They are in true/false format and can be given to students as part of their studying or exam preparation. Instructors are apt to prefer their own testing formats and hence may develop these items in ways that they believe are best suited for their own courses. I hope these questions help. They were developed based on the text rather than the Q&A in the workbook, *Exercising Essential Statistics*. We would like to hear from you regarding your testing methods.

—Evan Berman and XiaoHu Wang

Chapter 1: Why Statistics for Public Managers and Policy Analysts?

1. Data are used for describing and analyzing problems.
   Ans: T
2. Data are used for describing policies and programs.
   Ans: T
3. Data are used for monitoring fraud and preventing progress.
   Ans: F
4. Data are used to improve program operations.
   Ans: T
5. Data are used for evaluating outcomes.
   Ans: T
6. Accreditation bodies such as the Network of Schools in Public Policy, Affairs, and Administration, recognizes the role of quantitative skills in ensuring students required competencies.
   Ans: T
7. The textbook discusses three competencies for data analysis.
   Ans: F
8. Managers do not need to know how to collect their own data.
   Ans: F
9. Managers and analysts will have to be familiar with data sources in their lines of business.
   Ans: T
10. Managers and analysts need to be able to analyze data and present the findings of their analysis.
    Ans: T
11. Technical skills are sufficient and essential to ensuring soundness of analysis.
    Ans: F
12. Statistics is the careful, systematic process of inquiry that leads to the discovery or interpretation of facts, behaviors, and theories.
    Ans: F
13. The textbook discusses four stages of proficiency.

Ans: T

14. People at the "know nothing" stage of proficiency need to find useful examples of analysis that can help them.
Ans: T
15. Sophisticated experts have found the right balance between the development of policies and programs and the use of objective data and analysis to further decision-making.
Ans: T
16. There are three areas of ethical concern: (1) the integrity of purpose, (2) the integrity of the process of analysis and communication, and (3) the integrity of dealing with human subjects.
Ans: T
17. *Dual purposes* means that analysts have hidden facts or changed data.
Ans: F
18. Each year cases of scientific misconduct and fraud make headlines.
Ans: T
19. Key ethical principles in research involving people are that their participation should be voluntary and based on informed consent.
Ans: T
20. Institutional Review Boards oversee and regulate the quality of research.
Ans: F

Chapter 2: Research Design

SI = section introduction

1. Research methodology is the science of methods for investigating phenomena (SI).
Ans: T
2. The purpose of applied research is to develop new knowledge about phenomena such as problems, events, programs, or policies, and their relationships (SI).
Ans: F
3. Research begins by asking questions (SI).
Ans: T
4. Quantitative research methods involve the collection of data that can be analyzed using statistical methods (SI).
Ans: T
5. Both quantitative and qualitative methods are indispensable in addressing questions of basic and applied research (SI).
Ans: T
6. Research is fundamentally about establishing the nature of things.
Ans: T
7. Variables are defined as empirically observable phenomena that vary.
Ans: T
8. Attributes are defined as observable phenomena that do not vary.
Ans: F
9. Descriptive analysis provides information about the nature of variables.
Ans: T

10. Relationships involve specifying which variables are related to each other, and the ways in which they are related to each other.
    Ans: T
11. Relationships in social science are usually deterministic in nature.
    Ans: F
12. A single exception will normally disprove claims about relations in social science.
    Ans: F
13. Relationships also are distinguished as being either causal or associational.
    Ans: T
14. Distinguishing between independent and dependent variables is a cornerstone of research.
    Ans: T
15. Causation requires both (1) empirical (i.e., statistical) correlation and (2) a plausible cause-and-effect argument.
    Ans: T
16. A theory exists for just about every relationship in social science.
    Ans: F
17. Program evaluation involves three steps.
    Ans: F
18. Control variables are always dependent variables.
    Ans: F
19. Rival hypotheses are plausible counter explanations for relationships that are found.
    Ans: T
20. Classic experimental designs are widely used in public management and policy for determining the effect of new policies and programs.
    Ans: F
21. Statistics is the only way for dealing with rival hypotheses.
    Ans: F
22. If X causes Y (or in notation, $X \rightarrow Y$), then X is called the dependent variable because it affects Y.
    Ans: F
23. Threats to external validity are defined as those that jeopardize the generalizability of study conclusions about program outcomes to other situations.
    Ans: T

Threats to internal validity are those that jeopardize the study conclusions about whether an intervention