CHAPTER ONE

Basic concepts and terms

II. Conceptual exercises

A. Matching

1. g
2. a
3. f
4. i
5. e
6. b
7. c
8. d

B. True or false

1. F
2. F
3. T
4. T
5. F
6. F
7. F
8. F
9. T
10. T
11. F
12. T

C. Write variables into the table

Nominal	Ordinal	Interval	Ratio
gender	class rank	test scores	age
religion	letter grade	temperature	instructional time
learning styles	attitude scales	attitude scales	height
race or ethnicity	motivation scales		weight
test taking strategies			income
			essay length
			speech length

D. Short definitions

1. High-stakes test-based decisions

Definition: High-stakes test-based decisions are major, life-affecting ones where decision errors are difficult to correct. Because of the importance of their effects, the costs associated with making the wrong decision are very high. In large-scale tests the potential effects of decision errors are of particular concern, since the lives of many individuals are affected.

Example: tests for admission to colleges or universities, or tests for employment and tests for immigration and citizenship.

2. Low-stakes test-based decisions

Definition: Low-stakes test-based decisions, on the other hand, are relatively minor ones, where decision errors are relatively easy to correct. Because their effects are limited and errors are easy to correct, the costs associated with making the wrong decision are relatively low.

Example: Progress tests or diagnostic tests in schools or colleges, or class quizzes.

3. A construct

Definition: A construct is an attribute that has been defined in a specific way for the purpose of a particular measurement situation.

Example: reading ability, or writing ability, or speaking ability, or listening ability.

4. A variable

Definition: A variable is something that can have different values, or which can vary.

Example: test scores, or scores on a scale of attitudes to learning a language.

5. Nominal scale

Definition: A nominal scale consists of numbers that are used to name, or stand for different, mutually exclusive groups or categories of individuals, in terms of a particular attribute.

Example: native language, or academic discipline, or country of residence or occupation.

6. Ordinal scale

Definition: An ordinal scale consists of numbers that are not only distinct from each other but are also ordered with respect to each other.

Example: teacher's rankings, or scores based on rating scales.

7. Norm-referenced tests

Definition: In a norm-referenced test, an individual's score is compared, in terms of its relative standing, with those of other individuals in a group that has taken the test. In some cases, as is typical of large-scale testing agencies, this group consists of individuals with characteristics similar to those of the intended test takers.

Example: standardized state-wide or national tests such as the SAT (Scholastic Achievement Test) or the GRE (Graduate Record Examination).

8. Criterion-referenced tests

Definition: In a criterion-referenced score test, an individual's score is interpreted with reference to a pre-determined criterion that is independent of the way test takers perform on the test, either defined as a continuum, ranging from no proficiency at all to perfect performance, or as a domain-referenced or objective-based test.

Example: a speaking test which rates speaking ability on a criteria-based scale from 0 to 5, or a teacher-made school test that aligns with the curriculum (domain-referenced or objective-based test).

9. Descriptive statistics

Definition: Descriptive statistics are numbers that can be used to describe the characteristics of a distribution of scores.

Example: mean, or median, or mode, or range, or standard deviation, or variance.

10. Inferential statistics

Definition: Inferential statistical analyses consist of procedures for making inferences or generalizations about the performance of a larger group, or population, of individuals, based on the performance of a particular group, or sample, of individuals.

Example: T-tests, or the Chi-Square test, or analysis of variance.