**Unit 10 Outline**

**Learning Objectives**

Study of this unit should enable the student to

* distinguish between reproduction cost and replacement cost;
* determine reproduction/replacement cost using the index, square-foot, , unit-in-place, and quantity survey methods;
* explain what is meant by regional multipliers;
* use cost manuals; and
* compute the reproduction cost of a building based on building component costs

**Unit Outline**

I. Overview

II. Cost Approach Formula—reproduction or replacement cost of improvements new minus depreciation on improvements, plus site value, equals property value

III. Reproduction Cost Versus Replacement Cost

A. Reproduction cost—dollar amount required to construct an exact duplicate of improvements to the subject property at prices current as of the date of appraisal

B. Replacement cost—dollar amount required to construct improvements of equal utility to the subject, using current construction methods and materials

## Exercise 10-1

IV. Finding Reproduction/Replacement Cost

1. Index Method
   1. Factor representing the percentage increase to present time of construction costs up to the date of value is applied to the original cost of the subject building
   2. Formula—Present index divided by Index at time of construction times Original cost equals Present cost

## Exercise 10-2

B. Square-Foot Method—cost per square foot of recently built comparable structure is multiplied by number of square feet in subject property—may include use of cost manuals, which give building specifications and typical construction costs (Figures 10.1 and 10.2)

1. Regional multipliers—a given example in a cost manual can be used for any area of the country if the cost estimate obtained is multiplied by the adjustment factor for that region

2. Residential appraisals—the square-foot method of calculating reproduction cost is a commonly used technique for appraising residences

## Exercise 10-3

C. Unit-In-Place Method

1. All of the components in the subject structure are itemized, each is measured where necessary, and the current construction cost per unit of measure of each component is multiplied by the number of measured units of that component in the subject building (Figure 10.3)

2. Provides much more detailed breakdown of structure than does the square foot method

## Exercise 10-4

D. Quantity Survey Method—necessitates a thorough itemization of all the costs expected in the construction of the building; this is the most comprehensive and accurate method of estimating reproduction cost and requires precise, up-to-date cost figures

1. Direct costs (hard costs) are those related to materials and labor

2. Indirect costs (soft costs) are necessary but not construction-related expenses, such as surveys, payroll taxes, and profit

## Exercise 10-5

## Summary

## Review Questions