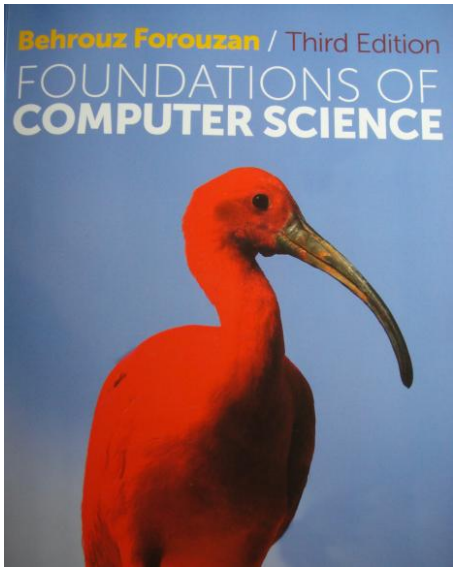

Chapter 2

Number Systems

Objectives

After studying this chapter, students should be able to:

- Understand the concept of number systems.
- Distinguish between different number systems.
- Describe the decimal, binary, octal, and hexadecimal systems.
- Convert a number in one system to another system.
- Convert a number (integer or real) in binary, octal or hexadecimal to a number in the decimal system.
- Convert a number (integer or real) in the decimal system to a number in binary, octal, and hexadecimal.
- Find the number of digits needed in each system to represent a particular value.

Review Questions

- Please list each instance for decimal, binary, octal, and hexadecimal number systems.
- Convert a real number to the number in binary, octal, and hexadecimal systems, 193.625 =_____B

  =_____O =_____H
- Convert a hexadecimal number to the number in decimal, binary, octal systems, C3.9EH =_____D

  =_____B =_____O
- What the maximum number of binary digits is required for storing an integer 387 ?