Import Settings:

Base Settings: Brownstone Default

Information Field: Complexity

Information Field: Ahead

Information Field: Subject

Information Field: Title

Information Field: Feedback

Information Field: Taxonomy

Information Field: Objective

Highest Answer Letter: E

Multiple Keywords in Same Paragraph: No

NAS ISBN13: 9781284155617, add to Ahead, Title tags

**Chapter: Chapter 02 - Practice Activities**

**Multiple Choice**

1. Which of the following is a value less than zero with a sign opposite to its positive counterpart?

A) Number

B) Natural number

C) Integer

D) Negative number

E) Rational number

Ans: D

Complexity: Easy

Ahead: Numbers and Computing

Subject: Chapter 2

Title: Binary Values and Number Systems

2. How many digits are there in the octal number system?

A) 1

B) 2

C) 7

D) 8

E) 9

Ans: D

Complexity: Easy

Ahead: Positional Notation

Subject: Chapter 2

Title: Binary Values and Number Systems

3. The rules for converting base-10 numbers to other bases involve which of the following?

A) Dividing by the base from which you are converting the number

B) Multiplying by the base from which you are converting the number

C) Dividing by the base into which you are converting the number

D) Multiplying by the base into which you are converting the number

Ans: C

Complexity: Easy

Ahead: Positional Notation

Subject: Chapter 2

Title: Binary Values and Number Systems

4. Which unit of binary storage has a size that is processor-dependent?

A) Byte

B) Nibble

C) Bit

D) Word

E) Block

Ans: D

Complexity: Easy

Ahead: Positional Notation

Subject: Chapter 2

Title: Binary Values and Number Systems

5. What is the lowest base in which the number 987 could be a valid number?

A) Binary

B) Base 3

C) Octal

D) Decimal

E) Hexadecimal

Ans: D

Complexity: Easy

Ahead: Positional Notation

Subject: Chapter 2

Title: Binary Values and Number Systems

**True/False**

1. True or False? Two-thirds is a rational number.

Ans: True

Complexity: Moderate

Ahead: Numbers and Computing

Subject: Chapter 2

Title: Binary Values and Number Systems

2. True or False? The digits used in base 8 are 1 through 8.

Ans: False

Complexity: Easy

Ahead: Positional Notation

Subject: Chapter 2

Title: Binary Values and Number Systems

3. True or False? Binary numbers are important in computing because numbers in every base can be converted into them.

Ans: False

Complexity: Difficult

Ahead: Positional Notation

Subject: Chapter 2

Title: Binary Values and Number Systems

4. True or False? Starting from the right, every group of four binary digits can be read as one hexadecimal digit.

Ans: True

Complexity: Easy

Ahead: Positional Notation

Subject: Chapter 2

Title: Binary Values and Number Systems

5. True or False? Representing a number in base 5 sometimes requires more digits than representing that same number in base 10.

Ans: True

Complexity: Difficult

Ahead: Positional Notation

Subject: Chapter 2

Title: Binary Values and Number Systems

**Short Answer**

1. A(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is any number that can be expressed as a fraction.

Ans: rational number

Complexity: Easy

Ahead: Numbers and Computing

Subject: Chapter 2

Title: Binary Values and Number Systems

2. The rightmost digit of a number is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ position in any base.

Ans: ones

Complexity: Easy

Ahead: Positional Notation

Subject: Chapter 2

3. One way to scramble numbers (e.g., for hashing) is to interpret them in a different \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Ans: base

Complexity: Easy

Ahead: Positional Notation

Subject: Chapter 2

Title: Binary Values and Number Systems

4. The base value of the hexadecimal number system is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Ans: 16

Complexity: Easy

Ahead: Positional Notation

Subject: Chapter 2

Title: Binary Values and Number Systems

5. A single binary digit is called a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Ans: bit

Complexity: Easy

Ahead: Positional Notation

Subject: Chapter 2

Title: Binary Values and Number Systems