

Conversion Problems

Convert each problem according to the category it is under. Show your work in order to receive partial credit. NOTE: Be sure to check whether or not each is a valid number.

1. Decimal-to-Binary Conversions

- a. $555_{10} = \underline{\hspace{2cm}}_2$
- b. $88_{10} = \underline{\hspace{2cm}}_2$
- c. $101_{10} = \underline{\hspace{2cm}}_2$
- d. $127_{10} = \underline{\hspace{2cm}}_2$
- e. $1024_{10} = \underline{\hspace{2cm}}_2$

2. Binary-to-Decimal Conversions

- a. $11000001_2 = \underline{\hspace{2cm}}_{10}$
- b. $000000101_2 = \underline{\hspace{2cm}}_{10}$
- c. $110111110_2 = \underline{\hspace{2cm}}_{10}$
- d. $1000000_2 = \underline{\hspace{2cm}}_{10}$
- e. $111000_2 = \underline{\hspace{2cm}}_{10}$

3. Binary-to-Octal Conversions

- a. $000111101110111_2 = \underline{\hspace{2cm}}_8$
- b. $1111111011_2 = \underline{\hspace{2cm}}_8$
- c. $101010101_2 = \underline{\hspace{2cm}}_8$
- d. $1110001111_2 = \underline{\hspace{2cm}}_8$
- e. $10100011011101100_2 = \underline{\hspace{2cm}}_8$

4. Octal-to-Binary Conversions

- a. $13667_8 = \underline{\hspace{2cm}}_2$
- b. $22524_8 = \underline{\hspace{2cm}}_2$
- c. $8876_8 = \underline{\hspace{2cm}}_2$
- d. $7701210_8 = \underline{\hspace{2cm}}_2$
- e. $356210_8 = \underline{\hspace{2cm}}_2$

5. Octal-to-Decimal Conversions

- a. $13667_8 = \underline{\hspace{2cm}}_{10}$
- b. $22524_8 = \underline{\hspace{2cm}}_{10}$
- c. $8876_8 = \underline{\hspace{2cm}}_{10}$
- d. $7701210_8 = \underline{\hspace{2cm}}_{10}$
- e. $356210_8 = \underline{\hspace{2cm}}_{10}$

6. Hexadecimal-to-Binary Conversions

- a. $E3412D_{16} = \underline{\hspace{2cm}}_2$
- b. $55619_{16} = \underline{\hspace{2cm}}_2$
- c. $CD324_{16} = \underline{\hspace{2cm}}_2$

d. $FFF_{16} = \underline{\hspace{2cm}}_2$

e. $7H103_{16} = \underline{\hspace{2cm}}_2$

7. Binary-to-Hexadecimal Conversions

a. $1111110010101_2 = \underline{\hspace{2cm}}_{16}$

b. $10101011100000110_2 = \underline{\hspace{2cm}}_{16}$

c. $100010001000_2 = \underline{\hspace{2cm}}_{16}$

d. $100111011101111110010_2 = \underline{\hspace{2cm}}_{16}$

e. $10101111000001110100000_2 = \underline{\hspace{2cm}}_{16}$

BONUS

Convert the following problem from Binary-to-Decimal.

$10101111000001110100000_2 = \underline{\hspace{2cm}}_{10}$