Questions for practice (Number System)

Q1 Determine the decimal numbers represented by the following binary numbers:

(a) 10111.01101
(b) 1100.1011
(c) 1001.0101
(d) 0.10101

Q2 Convert $(13.65625)_{10}$ to binary

Q3 Convert $(6327.4051)_8$ into its equivalent decimal number.

Q4 Convert $(3287.5100098)_{10}$ into octal.

Q5 Convert $(472)_8$ into binary

Q6 Convert $(1011011110.11001010011)_2$ into octal.

Q7 Convert $(3A.2F)_{16}$ into decimal system

Q8 Convert $(675.625)_{10}$ into hexadecimal

Q9 Convert $(21FA)_{16}$ to Binary System

Q10 Convert $(1010011010111)_2$ to hexadecimal number system

Q11 Convert $(48)_{10}$ into Excess-3 Code.

Q12 Perform 9's complement Subtraction

72532 − 03250

Q13 ⇒ $(705)_{R_1} = (453)_{10}$ Calculate R_1 & R_2

$(565)_{10} = (1065)_{R_2}$

Q14 Calculate (r-1)'s Complement for the following number system.

① $(1001100)_2$

② $(2654)_8$

③ $(2689)_{10}$

④ $(5673)_{16}$

Q15- Calculate (r)'s Complement for the above given number system in previous question using the formula

r's complement = (r-1)'s Complement + r^{-n}

Q16 Calculate the range in 2's Complement representation for n = 4 bits.

Q: If $(2.3)_4 + (1.2)_4 = (Y)_4$ What is the value of Y?