Tutorial 1

Q-1 Convert the following into decimal:

1) $(110.101)_2$

2) $(110110100)_2$

3) $(198)_{12}$

4) $(755)_8$

Q-2 The representation of the value of a 16-bit unsigned integer X in a hexadecimal number system is BCA9. The representation of the value of X in octal number system is?

Q-3 Let the representation of a number in base 3 be 210. What is the hexadecimal representation of the number?

Q-4 Convert 59.72_{10} to BCD.

Q-5 Obtain 1's and 2's complement:

1) 1010110

2) 00000001

Q-6 Obtain 9's and 10's complement:

1) 12349876

2) 00980100

Q-7 Perform the subtraction with the following unsigned decimal numbers by taking the 10's complement of the subtrahend:

1) 5250-1321
2) 1753-8640
3) 20 -100

Q-8 Perform the subtraction with the following unsigned binary numbers by taking the 2's complement of the subtrahend:

1) 11010-10000

2) 1010100-1010100

Q-9 In 16-bit 2's complement representation, the decimal number -28 is ?

Q-10 Equation: $(7526)_8 - (Y)_8 = (4364)_8$, where $(X)_N$ stands for X to the base N. Find Y.