



Tutorial No. 3

1. The decimal number system is in base ____.
2. The binary number system is in base ____.
3. The octal number system is in base ____.
4. Convert the following decimal numbers into binary
a) 24 b) 675 c) 89 d) 34.24 e) 150.64 f) 24.14
5. Convert the following binary numbers into decimal numbers.
a) 110000111 b) 110011 c) 1001111 d) 1100110.1110
6. Convert the following octal numbers into decimal numbers.
a) 234 b) 217 c) 25.33
7. Convert the following hexadecimal numbers into decimal numbers.
a) E16 b) 389 c) 2AB
8. How many bits would be required to encode decimal numbers 0 to 9999 in binary codes?
a) 12 b) 14 c) 16 d) 18
9. Which of the following is the most widely used alphanumeric code for computer input and output?
a) Gray b) ASCII c) Parity d) EBCDIC
10. The hexadecimal equivalent of a decimal 14 is _____.
a) "C" b) "D" c) "E" d) "F"
11. What is the addition of the binary numbers 11011011010 and 010100101?
a) 0111001000 b) 1100110110 c) 11101111111 d) 10011010011
12. Perform binary addition: $101101 + 011011 = ?$
a) 011010 b) 1010100 c) 101110 d) 1001000