Practices

1. Convert 101011 this binary representation to its equivalent base ten form
2. Convert 11000110 this binary representation to its equivalent base ten form
3. Convert 110 this base ten representation to its equivalent binary form
4. Convert 73 this base ten representation to its equivalent binary form
5. Convert 10011 this 2's complement representation to its equivalent base ten form
6. Convert 10001 this 2's complement representation to its equivalent base ten form
7. Convert -6 base ten representation to equivalent two's complement form using the pattern of 8 bits
8. Convert -11 base ten representation to equivalent two's complement form using the pattern of 8 bits
9. In the binary representation, what is $1011 + 10001$?
10. In the binary representation, what is $1011001 + 10001$?
11. What is $0x32 + 0x9A$ in the hexadecimal representation?
12. What is $0x99 + 0x121$ in the hexadecimal representation?
13. What is the hexadecimal representation of the binary number 10010100010010?
14. What is the hexadecimal representation of the binary number 101010111000?
15. If we have 4 bits as fraction bits and 3 bits as exponent bits, what is the value of truncation error when we encode -4.75 using IEEE standard for floating point. The exponent are in the excess number notation, as shown in the table below.
16. If we have 4 bits as fraction bits and 3 bits as exponent bits, what is the value of truncation error when we encode 1.2 using IEEE standard for floating point. The exponent are in the excess number notation, as shown in the table below.

Excess notation	Bit pattern
3	111
2	110
1	101
0	100
-1	011
-2	010
-3	001
-4	000