CSE220: SYSTEMS FUNDAMENTALS I
Assignment 1
Due on 14 Sep 2023, by 5PM

Show all the steps in how you obtain your answers.

1. Convert the following decimal numbers to unsigned binary.
   (a) 45
   (b) 108

2. Convert the numbers in Qu. 1 to hexadecimal.

3. Convert the following unsigned binary numbers to decimal.
   (a) 0110110
   (b) 1010101

4. Convert the following hexadecimal numbers to decimal.
   (a) A12B
   (b) 1C0D

5. Convert the following decimal numbers to 8-bit two's complement.
   (a) -11
   (b) -37

6. Assume the following binary patterns represent numbers in two's complement notation. What are the represented numbers in decimal?
   (a) 101101
   (b) 1101101

7. Convert the following numbers to 32-bit IEEE-754 floating-point representation. Give the answers in both binary and hexadecimal.
   (a) 11.625
   (b) -0.15625

8. Convert the following 32-bit IEEE-754 floating-point representation into decimal.
   (a) 0xC1DEC000
   (b) 0x3EA80000