Name: **Id#**

Q1. Represent the following numbers in **binary** and **hexadecimal**. Use as many bits as needed, and approximate the fraction to **4 binary digits**:

    i. $(200.6)_{10}$

    ii. $(54.5)_7$

Q2. Assume that an 8-bit register contains the following number 10111000. Determine the content of the register assuming that it represents:

    i.   an unsigned number.

    ii.   a 2's complement signed number.

Q3. Perform the following operations assuming that numbers are represented using 8-bits assuming **r's complement** representation, and determine if there is an overflow or not:

    i.   11101110 + 11110111

    ii. 4C - D0

Q4. Determine, in **binary** and **decimal**, the *smallest (negative)* number and the *largest (positive)* number that can be stored using the 2`s complement notation, assuming *10-bit representation*.