CSIS-1030
Number Systems

1. Given ***n*** number of bits, what is the formula for

   a) the largest value that can be represented – signed representation
   511

   b) the smallest value that can be represented – signed representation
   0

2. Fill in the following chart for the base 2 number system

Binary digit value	16	0	4	0	1
Binary digit	1	0	1	0	1
Position number	16's	8's	4's	2's	1's

Corresponding base 10 value 2

3. Convert these binary numbers to their equivalent hexadecimal numbers

   a) 0100 0010 0101 1110 425E

   b) 1010 0011 1100 0010 A3C2

   c) 1111 1010 1100 1110 FACE

4. What is the three step sequence to find the binary representation of a negative number?

   a) Original binary sequence

   b) Flip the digits

   c) Add one

5. What is the 8-bit binary representation for

   a) 67 = 01000011

   b) -67 = 10111101