Lab2 Post Lab Questions

1. (2 pts ea)Give the decimal value for the 8-bit binary number "11001000" interpreted as:

   a. Unsigned integer (8.0 format)
   b. Two's complement integer (8.0) format
   c. Unsigned number, (0.8 format)
   d. Unsigned number (4.4 format)

2. (2 pts ea) Give the result of the following sums (the numbers are in base 16)
   a. 80h + 01h (normal addition)
   b. 80h + 01h (signed saturating addition)
   c. 80h + 01h (unsigned saturating addition)
   d. 7Fh + 01h (normal addition)
   e. 7Fh + 01h (signed saturating addition)
   f. 7Fh + 01h (unsigned saturating addition)
   g. F0h + 20h (normal addition)
   h. F0h + 20h (signed saturating addition)
   i. F0h + 20h (unsigned saturating addition)

3. (5 pts) Why is saturating addition useful?

4. (8 pts) What is the basic programmable element in an Altera FLEX 10K FPGA? Is the FLEX10k volatile or non-volatile?

5. (8 pts)What is the basic programmable element in an Altera Max 7000 device? Is the Max 7000 volatile or non-volatile?