UNIVERSITY OF CALIFORNIA, DAVIS

Department of Electrical and Computer Engineering
EEC70   **Assembly Language and Computer Organization**   Winter 2001
Homework#2

Due on Tuesday, February 6 at 6 p.m.

First Name:
Last Name:

1. **Convert -78_{ten} into a**
    a. **8-bit two's complement binary system**

    b. **Sign and magnitude representation**

    c. **8-bit one's complement binary system**

2. **Given the 8-bit pattern: 10010110**
    What does it represent, assuming that it is
    a. **A two's complement integer**

    b. **A one's complement integer**

    c. **An integer represented by sign and magnitude**

3. **What Octal number does this hexadecimal number represent: $7f2f3abc_{hex}$**

4. **What Hexadecimal and Octal numbers does this binary number represent:**
    1100 1010 1101 1111 0010 0000 0001 0000

5. **Fill in the missing entries of the following table**

Binary	Ternery (Base three)	Decimal
11001		
	1012	
		45

6. **Give binary representation for the following fractional decimal values.**
    a. **17.0625**
    b. **9.4**
    c. **0.025**