

CSC 220 Homework #1

Due: April 3, 2006

1. Convert decimal 369.3125 to binary, octal, and hex
2. Convert binary $(1011\ 1101.101)_2$ to decimal, octal and hex
3. Convert octal $(326.5)_8$ to decimal, binary, and hex
4. Convert hex $(F3C7.A)_{16}$ to decimal, binary, and octal
5. Express decimal -220 in each binary format
 - a. signed-magnitude
 - b. 1's complement
 - c. 2's complement
 - d. excess 256
6. Perform each addition/subtraction using 2's complement
 - a. Add: $0110\ 0011 + 0010\ 0111$
 - b. Add: $1110\ 0111 + 1100\ 0001$
 - c. Sub: $0000\ 0000 - 0011\ 1111$
 - d. Sub: $1001\ 0110 - 0000\ 1111$
7. Do the subtractions in problem 6 using 1's complement
8. Multiply in binary: $0101 * 0110$
9. Page 698, problem 1... show your work
10. Page 698, problem 2... again, show your work