

CS 3843 Computer Organization Fall 2013

Name (Last, First)_____, _____

1. (12 points) For the following questions, show all 12 bits and 3 hexadecimal digits.
 - a. (2 points) Find the binary and hexadecimal representation of 75 as a 12-bit unsigned integer.
 - b. (2 points) Find the binary and hexadecimal representation of -75 as a 12-bit two's complement integer.
 - c. (2 points) Find the binary and hexadecimal representation of -75 as a 12-bit ones' complement integer.
 - d. (2 points) Find the binary and hexadecimal representation of -75 as a 12-bit sign magnitude integer.
 - e. (2 point) What is the maximum value that can be represented with 12-bit two's complement?
 - f. (2 point) What is the maximum value that can be represented with 12-bit unsigned number?
2. (4 points) Show how to use shift, adding and subtracting to efficiently multiply by 29.
3. (4 points) what is $36 + {}^u_648$?