Quiz 2

(February 11th @ 5:30 pm)

Problem 1 (40 pts)

- Complete the following table:

REPRESENTATION			
Decimal	**Sign-and-magnitude**	**1's complement**	**2's complement**
	11000		
			100
		0110	
-9			

- Convert the following decimal number to its 2's complement representation: -9.75 (5 pts)

Problem 2 (20 pts)

- Perform the following operation in the 2's complement system, i.e., provide the summands and the result in 2's complement representation (indicate the carries). Use the minimum number of bits to represent both the summands and the result so that the overflow bit is 0.
  - ✓ -11 + 16

Problem 3 (40 pts)

- Complete the timing diagram of the circuit shown below: $y = y_3y_2y_1y_0$, $x = x_1x_0$