Quiz 2

(February 9th @ 5:30 pm)

Problem 1 (35 pts)

- Complete the following table. Use the fewest number of bits in each case:

REPRESENTATION			
Decimal	**Sign-and-magnitude**	**1's complement**	**2's complement**
			101100
	0100101		
		101111	
-32			

- Convert the following decimal number to its 2's complement representation: -16.625 (5 pts)

Problem 2 (30 pts)

- Implement the following function using ONLY 2-to-1 MUXs (AND, OR, NOT gates are not allowed):

$$f(x,y,z) = x \oplus y \oplus z$$

Problem 3 (35 pts)

- Complete the timing diagram of the circuit shown below: