Quiz 2

(February 8th @ 5:30 pm)

PROBLEM 1 (35 PTS)

- Complete the following table.

REPRESENTATION			
Decimal	**Sign-and-magnitude**	**1's complement**	**2's complement**
	1110		
		1111	
			100
		01110	

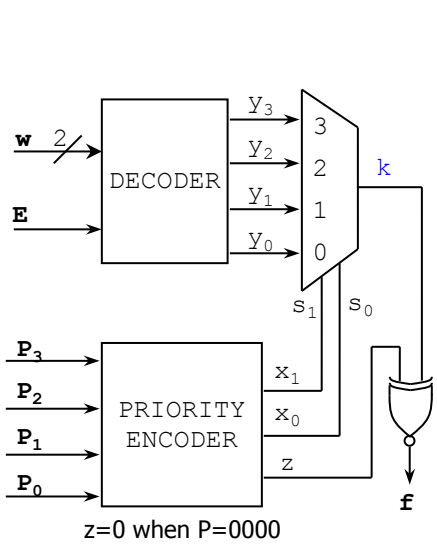
- Convert the following decimal number to its 2's complement representation: -14.25 (5 pts)

PROBLEM 2 (30 PTS)

- Perform the following operations 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.
  - ✓ -19 - 14

PROBLEM 3 (35 PTS)

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



z=0 when P=0000