Quiz 2

(February 9th @ 5:30 pm)

PROBLEM 1 (35 PTS)

• Complete the following table. Use the <u>fewest</u> 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)

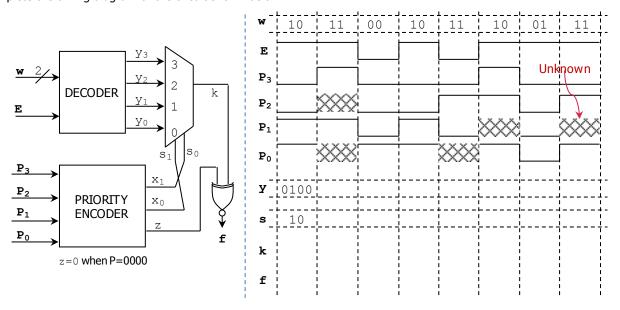
PROBLEM 2 (30 PTS)

• Implement the following function using <u>ONLY</u> 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:



1