Quiz 2

(February 5th @ 5:30 pm)

PROBLEM 1 (50 PTS)

- Complete the following table:

REPRESENTATION			
Decimal	**Sign-and-magnitude**	**1's complement**	**2's complement**
	11011		
		0111	
-16			
			1000

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

PROBLEM 2 (25 PTS)

- Perform the following operations in the 2's complement representation, i.e., provide the summands and the result in 2's complement representation. Use the minimum number of bits to represent both the summands and the result so that the overflow bit is 0.
  - ✓ -11 - 27

PROBLEM 3 (25 PTS)

- A microprocessor is able to handle memory addresses between 0x0000 and 0x1FFF. Each memory address occupies one byte. What is the size (in bytes or KB) of the memory space? What is the address bus size of the microprocessor?