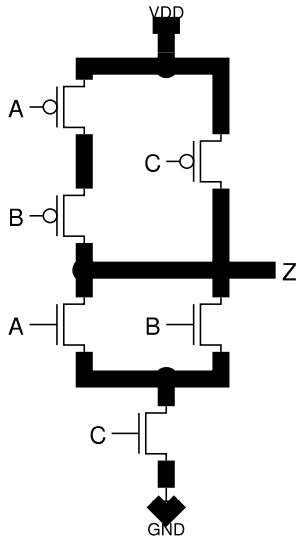
1.

a) Below you can see on the left four binary numbers and on the right 4 interpretations of these numbers and a corresponding value. Match the number on the left to the descriptions on the right. (2 points)

Binary Number		Value, Interpretation	
1	11110	A	Decimal -1, 5-bit two's complement
2	10001	B	Decimal -1, 5 bit sign magnitude
3	10010	C	Decimal 30, 5 bit unsigned
4	11111	D	Hexadecimal 0x12, 5 bit unsigned

1-C 2-B 3-D 4-A

b) Consider the transistor level schematic below. What is the output going to be when A=1, B=0, C=1? (1 point)



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c) Using only 2-input AND, 2-input OR, or inverters, draw a gate level schematic that realizes the same Boolean Function as the circuit shown in 1(b). (2 points)