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Elec 2200

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### Hw 3

1.  $38 + 12$      $38 \rightarrow 100110$      $100110$   
                   $12 \rightarrow 001100$      $+ 001100$   
                                   $110010_2 \rightarrow 50_{10} \text{ (decimal)}$

2.  $51 - 93$      $51 \rightarrow 00010011$   
                   $93 \rightarrow 01011101$

negate 93

- 1011101 } Flip

0100010

↓ Add 1

$10100011_2 (-93_{10})$

51     $0010011$

+ (-93)     $0100011$

$0110110_2 = -54$

? It's supposed to be  
-42 in binary

3. The lowest / most negative number would  
be 10000, which is -16.

The highest / most positive number would  
be 1111, which is 31.