## 2s Complement

- instead of 1s being the values of the number, 0s represent what is subtracted to get the number (when negative)

1000 0000 = -128

1111 0000 = -113

0110 1001 = 105

1101 0001 = -47

0000 0000 = 0

1111 1111 = -1

0111 1111 = 127

## Unsigned Number Interpretation

213 + 18 = 231

1101 0101 + 0001 0010 = 1110 0111

Overflow possible but did not happen

43 + 238 = 281

0010 1011 + 1110 1110 = 1 0001 1001

Overflow!

213 + 238 = 451

1101 0101 + 1110 1110 = 1 1100 0011

Overflowwww

## Signed Number Interpretation

-43 + 18 = -25

1101 0101 + 0001 0010 = 1110 0111

Overflow not possible (one positive and one negative)

43 + -18 = 25

0010 1011 + 1110 1110 = 1 0001 1001

Overflow STILLLLLLLLL not possible lol!!!!!!

213 + 238 = 451

1101 0101 + 1110 1110 = 1 1100 0011

Overflowink not possible