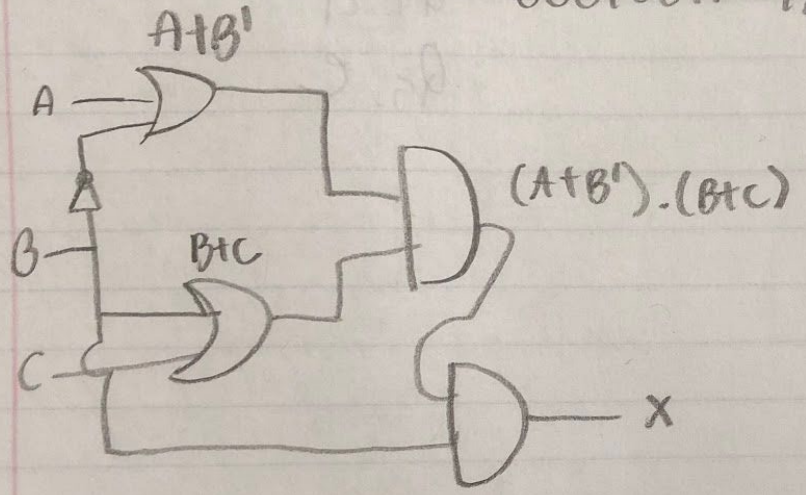
$-37 \Rightarrow 0010\ 0101 \Rightarrow 1101\ 1011$

$11101101 = -19$

8-bit no overflow

$00010011 = 19$

3.



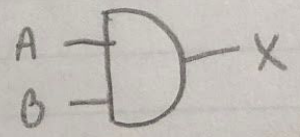
$X = B \cdot (A+B') \cdot (B+C)$

$(C+B) \cdot B = B$

Covering $(A+B') \cdot B$

Distributive $(A+B') \cdot B = AB + B'B$

$AB + B'B$

Complements $B' \cdot B = 0$

$X = AB$