BLG231 DigitalCircuits HW1

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1)

i) (153)10=(10011001)2 (141)10=(10001101)2

ii)

Carry

2)

i) (−68)10 0100010010111100 (−77)10 0100110110110011

ii)

Overflow

Carry(ignored)

3)

i) [ 𝑏⨀𝑑] + 𝑎𝑏𝑐 + 𝑏𝑐𝑑 + 𝑎𝑏̅𝑑̅+ [ 𝑎⨁𝑐 ] + 𝑎𝑏̅

ii)𝑏𝑒 + 𝑎̅𝑐𝑑̅+ 𝑏̅𝑑𝑒 + 𝑎𝑏̅𝑐 + 𝑎𝑏𝑒̅+ 𝑎𝑏̅𝑐̅+ 𝑏̅𝑑̅e