ESET 219 Homework 2

1. For the given binary math operations, write the answer in **binary** and **decimal**. Assume numbers are represented as a **signed** byte.

a. 20 – 33

b. 89 + 55

2. For the given binary math operations, write the answer in **HEX** and **decimal**. Assume the numbers are represented as an **unsigned** byte.

a. 200 + 160

b. 100 – 135

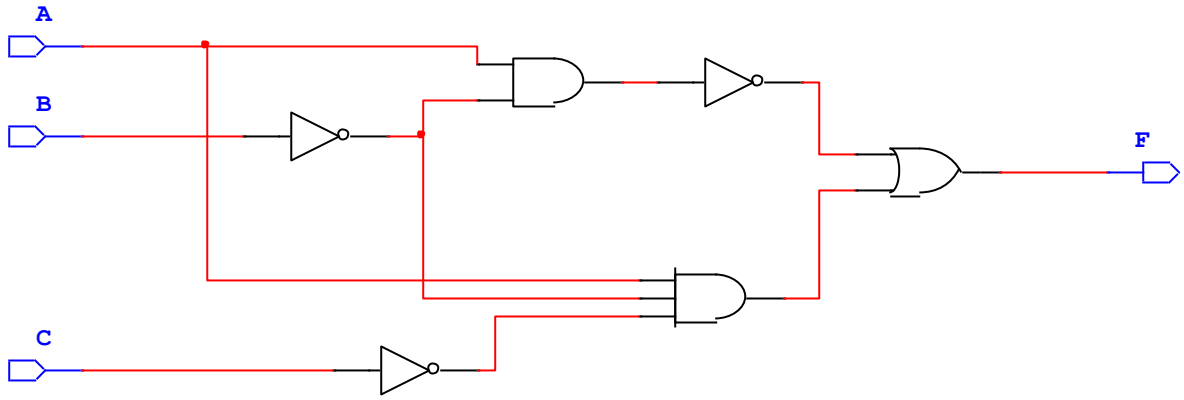
3. Draw the logic circuit for the following Boolean equations

a. $F = \overline{A\bar{B}} + B(\bar{A} + C)$

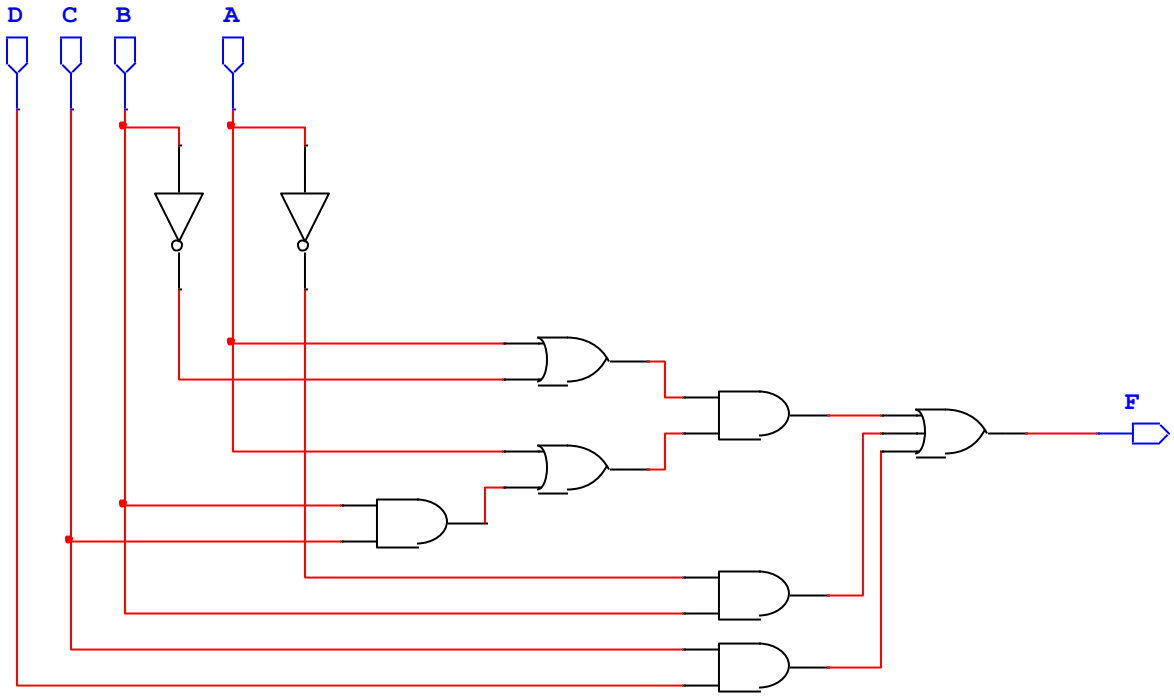
b. $AC + [(A + C)(AD + A\overline{D})] + B$

4. Given the following schematics, write the Boolean equation for the output F

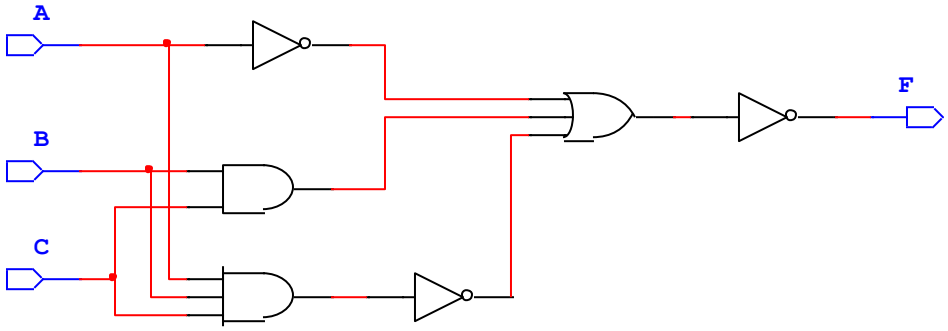
a.



b.



5. Given the following schematic, if the input is 001 what is the output F? Assume A is the MSB.



6. Given the following schematic
   a. Fill in the timing diagram for the output F