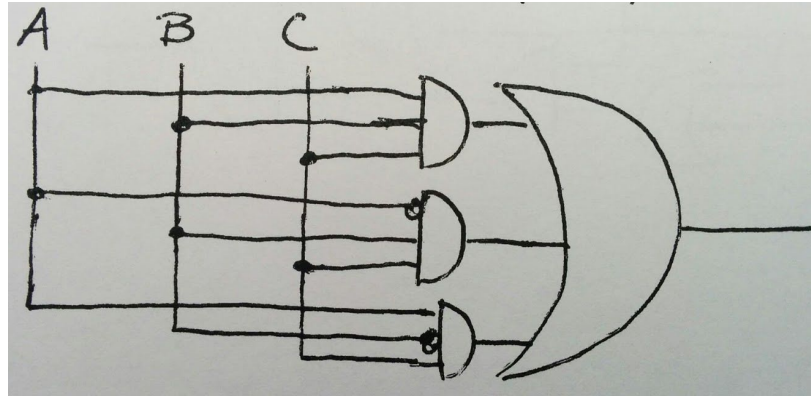


Digital Logic (Part 2) + Integer Representation (Part 1)

1. For the following circuit:

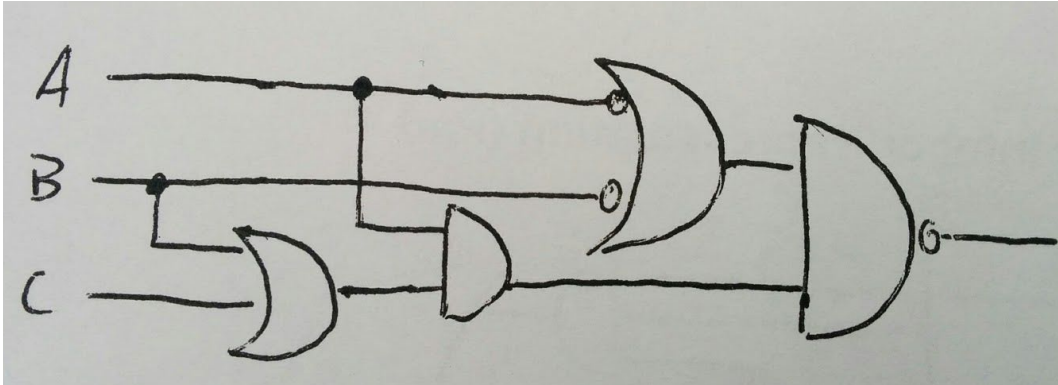


a. Write the truth table:

b. Derive the boolean expression in sum-of-products form:

c. Simplify your answer from part b using the boolean algebra laws, and write the corresponding law next to each step.

2. For the following circuit, derive the boolean expression and simplify it (with the laws you used written next to each step).



3. What's **156** (in base 10) in binary?

a. What is it in hexadecimal?

b. What is $156_{10} + 00111011_2$ in binary form?
(i.e. Don't use the base 10 number or convert the binary number into base 10...)

4. What is **256** in hexadecimal?

a. What is it in binary?

5. What is 1111_2 in hexadecimal?