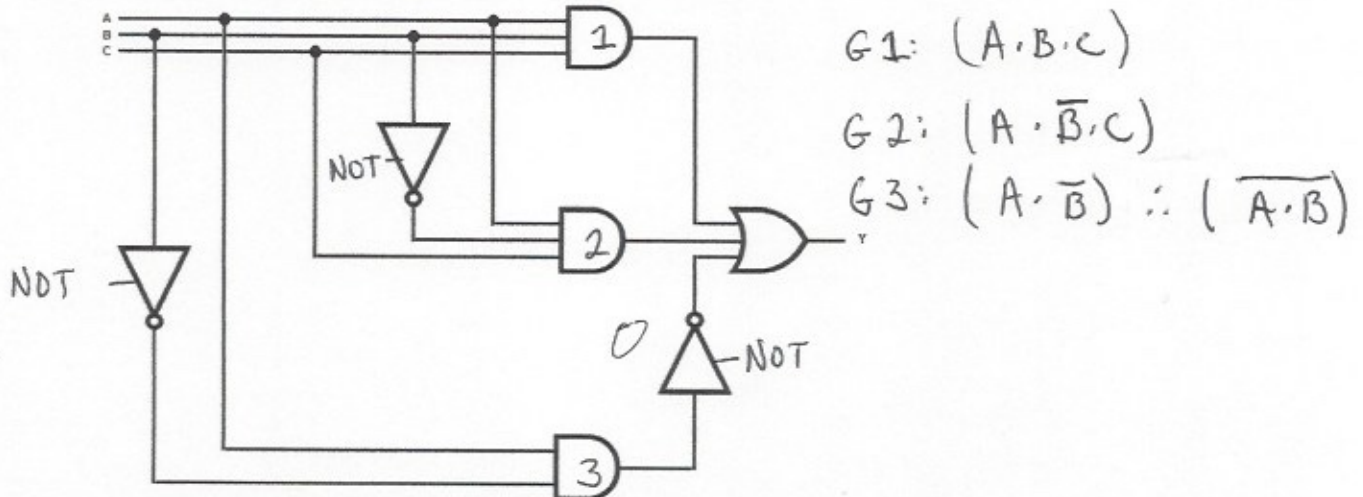Author: Allen Myers
Project: CIS021-HW Lab2
Date: January 31st, 2019
Module: CIS021-Homework 2
Purpose: Convert a logic diagram to an output expression.
            Create truth tables.
            Minimize a circuit.

1. Examine the following circuit diagram:

G1: $(A \cdot B \cdot C)$

G2: $(A \cdot \bar{B} \cdot C)$

G3: $(A \cdot \bar{B}) \therefore (\overline{A \cdot B})$

2. Write the output formula for the diagram:

$$Y = (A \cdot B \cdot C) + (A \cdot \bar{B} \cdot C) + (\overline{A \cdot B})$$

3. Write the truth table for the formula produced in Step 2:

Y	A	B	C
0	0	0	0
0	0	0	1
1	0	0	1
1	0	0	1
0	1	0	0
1	1	0	0
0	1	0	0

4. Reduce the circuit and write the new formula:

$$Y = (A \cdot B \cdot C) + (\bar{A} \cdot B) + (A \cdot \bar{B} \cdot C)$$