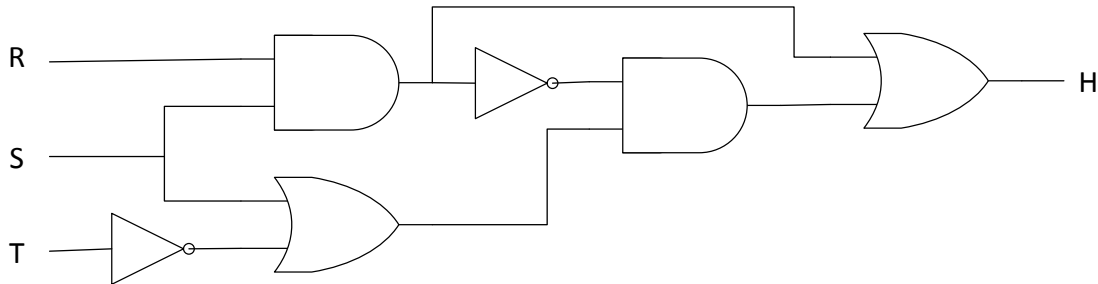


1. Simplify the following equation:
  - a) using **only** the laws of Boolean algebra.
  - b) using the laws **and** theorems of Boolean algebra.

$$F = BC'D' + D'CB + C'AC$$

2. Write a Boolean algebra equation for the following logic circuit.



3. Construct a logic circuit using AND, OR, and NOT gates for the following equation.

$$G = (W + Y')(X'YZ)' + (W'X)(X + Y'Z)$$

4. Prove the following equation using a truth table.

$$(A + C)(AB + C') = AB + AC'$$