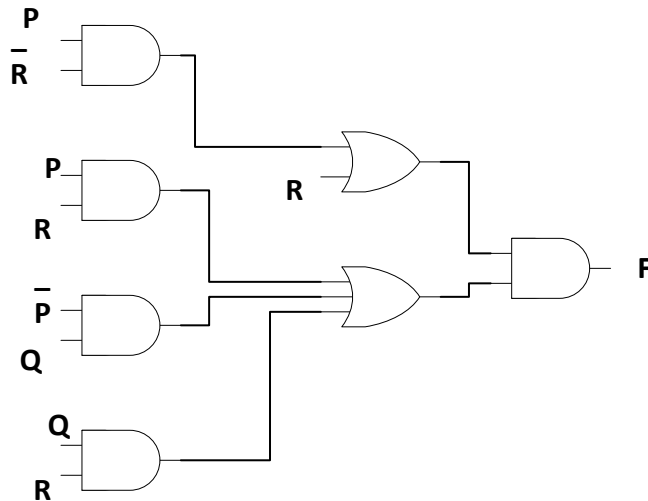


Pre-Lab Worksheet

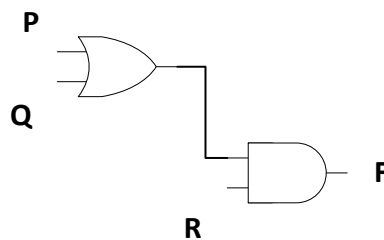
NAME: _____ LAB Section: B0__

Your work to simplify: $F = (\overline{P}\overline{R} + R)(PR + \overline{P}Q + QR)$	Boolean Algebra Rule Used
$F = (\overline{P}\overline{R} + R)(PR + \overline{P}Q + QR)$	
$F = PPR\overline{R} + RPR + \overline{P}\overline{P}Q\overline{R} + \overline{P}QR + PQ\overline{R}R + RQR$	Distributive
$F = 0 + PR + 0 + \overline{P}QR + 0 + QR$	Complement, Idempotent
$F = PR + QR(\overline{P} + 1)$	Distributive, identity
$F = PR + QR$	Identity
$F = R(P + Q)$	Distributive

Circuit #1: Unsimplified $F = (P\bar{R} + R)(PR + \bar{P}Q + QR)$



Circuit #2: Simplified F



Finally, write a list of things that you learned in doing this pre-lab:

- Simplified circuit is much easier to draw
- Be careful applying Boolean Algebra rules consistently.