



Controlling circuits using logic

Solution

Note: steps can be done in a different order. The terms used in the simplification are shown in gray.

Question #1:

$$Z = Y(V+Y) + W + VY$$

$$VY + YY + W + VY$$

$$VY + Y + W + VY$$

$$VY + Y + W$$

$$Y + W$$

Question #2:

$$F = (V \cdot R) + (V \cdot W) + (V) + (S \cdot R) + (S \cdot W) + (P \cdot V) + P$$

$$VR + VW + V + SR + SW + PV + P$$

$$VR + V + SR + SW + PV + P$$

$$V + SR + SW + PV + P$$

$$V + SR + SW + P$$

$$V + S(R+W) + P$$