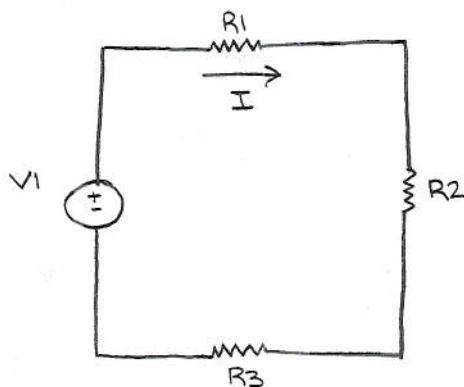


4. When  $V_1 = 10V$ ,  $I = 1A$ , and the voltage drops across  $R_1$  and  $R_2$  are 2V and 3V, respectively. Find  $R_3$  and the power dissipated in  $R_3$ .



$$V_1 = 10V$$

$$V_{R1} = 2V$$

$$V_{R2} = 3V$$

$$\Rightarrow V_{R3} = 5V$$

Ohm's Law:  $V = IR$

$$S = I \cdot R$$

$$R = 5\Omega = R_3 \quad (3 \text{ pts})$$

Watt's Law:  $P = IV = 1A \cdot 5V = 5 \text{ Watts}$  (1 pt)