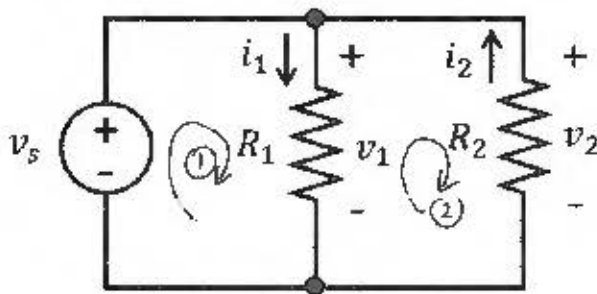


For each of the resistors, calculate the current through them and power received by them.



$$v_s = 20 \text{ V}$$

$$R_1 = 20 \Omega$$

$$R_2 = 10 \Omega$$

$$\text{KVL } \textcircled{1} : v_s = v_1 \Rightarrow v_1 = 20 \text{ V}$$

$$\text{KVL } \textcircled{2} : v_1 = v_2 \Rightarrow v_2 = 20 \text{ V}$$

$$i_1 = \frac{v_1}{R_1} = \frac{20}{20} \Rightarrow \boxed{i_1 = 1 \text{ A}}$$

$$i_2 = \frac{-v_2}{R_2} = \frac{-20}{10} \Rightarrow \boxed{i_2 = -2 \text{ A}}$$

$$P_1 = \frac{v_1^2}{R_1} = \frac{400}{20} \Rightarrow \boxed{P_1 = 20 \text{ W}}$$

received

or could have used

$$P = R \cdot i^2 \text{ or } P = i \cdot v$$

$$P_2 = \frac{v_2^2}{R_2} = \frac{400}{10} \Rightarrow \boxed{P_2 = 40 \text{ W}}$$

received