

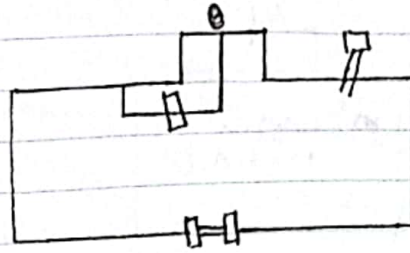
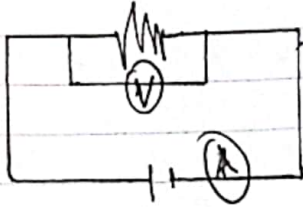
Senin, 29 April 2024

Nira Ulfia Dila
2213022005

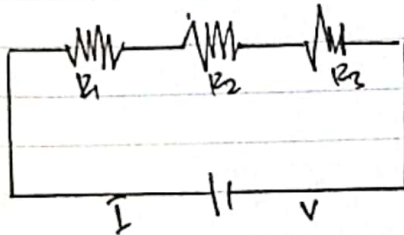
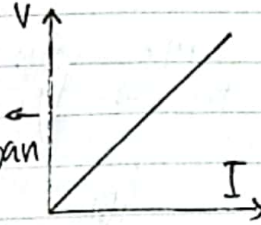
No.
Date

Klausur Pertemuan ke-9

1. Hukum Ohm
2. Rangkaian Listrik



Hubungan
antara tegangan
dan kuat arus



$$\rightarrow I R_1 = \frac{V}{(R_1 + R_2 + R_3)} = V R_1 = I \cdot R_1$$

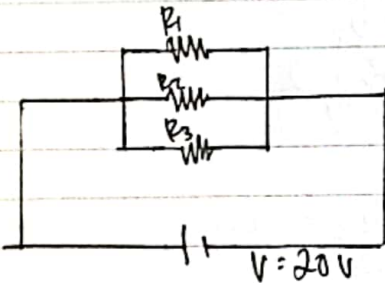
$$V R_1 = \frac{V}{(R_1 + R_2 + R_3)} = R_1$$

$$I = \frac{V}{(R_1 + R_2 + R_3)}$$

$$I = I R_1 = I R_2 = I R_3$$

$$I R_2 = \frac{V}{(R_1 + R_2 + R_3)}$$

$$I R_3 = \frac{V}{(R_1 + R_2 + R_3)}$$



$$R_1 = 2 \Omega$$

$$R_2 = 3 \Omega$$

$$R_3 = 4 \Omega$$

$$I R_1 = V / R_1$$

$$I R_2 = V / R_2$$

$$I R_3 = V / R_3$$

$$V R_1 = V R_2 = V R_3 = V$$

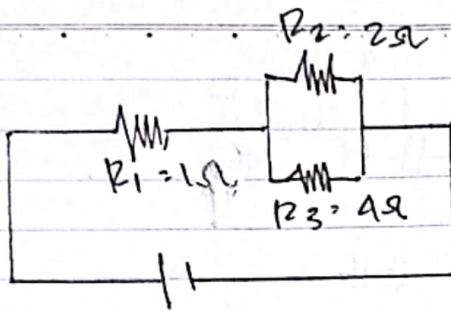
$$I = V / R_t$$

$$I = 20 / 0,92 = 21,73 \text{ A}$$

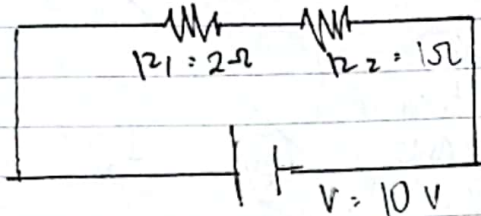
$$\frac{1}{R_t} = \frac{1}{2} + \frac{1}{3} + \frac{1}{4}$$

$$\frac{1}{R_t} = \frac{13}{12} \quad R_t = \frac{12}{13} \Omega = 0,92 \Omega \quad I R_3 = V / R_3 = 20 / 4 = 5 \text{ A}$$

$$\frac{1}{R_1} = V / R_1 = 20 / 2 = 10 \text{ A} \quad I R_2 = V / R_2 = 20 / 3 = 6,6 \text{ A}$$



$$\begin{aligned} \frac{1}{R_t} &= \frac{1}{R_2} + \frac{1}{R_3} \\ \frac{1}{R_t} &= \frac{1}{2} + \frac{1}{4} \\ \frac{1}{R_t} &= \frac{3}{4} \\ R_t &= \frac{4}{3} \Omega \end{aligned}$$



$$\begin{aligned} R_t &= R_1 + R_2 \\ &= 2 + 1 \\ &= 3 \Omega \end{aligned}$$

$$I_t = \frac{V}{R_t} = \frac{10}{3} = 3.3 \text{ A}$$

$$\begin{aligned} I_{R_1} &= 3.3 \text{ A} \\ I_{R_2} &= 3.3 \text{ A} \\ I_{R_3} &= 6.6 \cdot 3.3 \\ &= 21.78 \text{ Watt} \\ P_{R_1} &= 3.3 \times 3.3 \\ &= 10.89 \text{ Watt} \end{aligned}$$

$$\begin{aligned} V_{R_1} &= I \cdot R_1 \\ &= 3.3 \cdot 1 \\ &= 3.3 \text{ V} \end{aligned}$$

$$\begin{aligned} V_{R_2} &= I \cdot R_2 \\ &= 3.3 \cdot 2 \\ &= 6.6 \text{ V} \end{aligned}$$

$$\begin{aligned} I_{R_2} &= I_{R_3} = \frac{V_{R_2}}{R_2} \\ &= \frac{6.6}{2} \\ &= 3.3 \text{ A} \end{aligned}$$