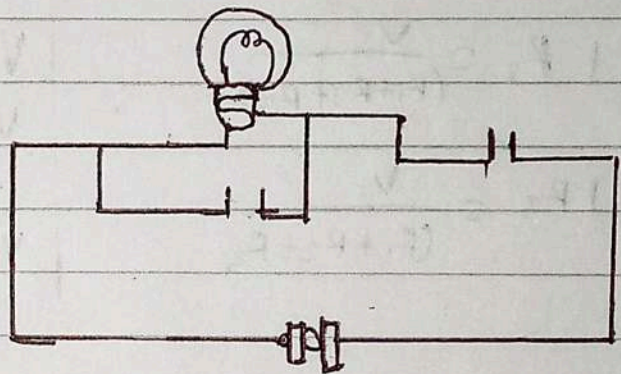
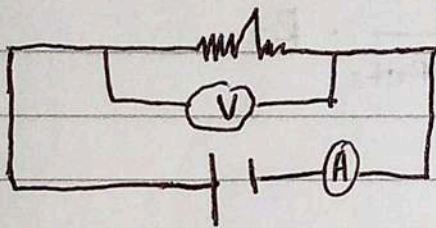


KALISMA

Elektro dinamika

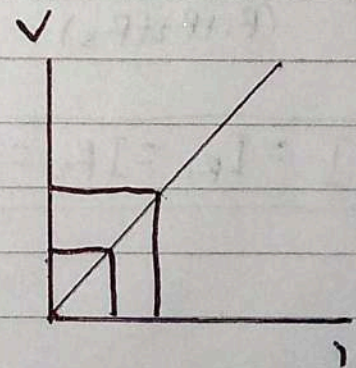
1. Hukum Ohm
2. Rangkaian Listrik.

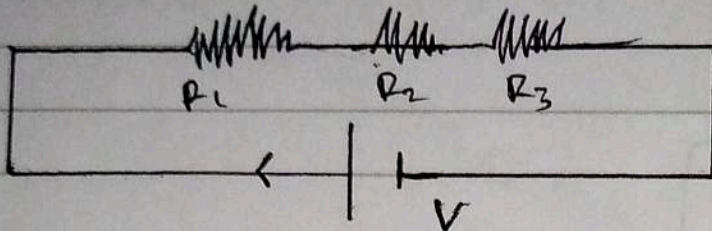
1. Rangkaian



Hubungan V dan I
yang dimana R adalah
tetap.

$$V = I R$$





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

$$= \frac{V}{R}$$

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

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

$$V_{R_1} = I \cdot R_1$$

$$V_{R_1} = \frac{V}{R_1 + R_2 + R_3} \cdot R_1$$

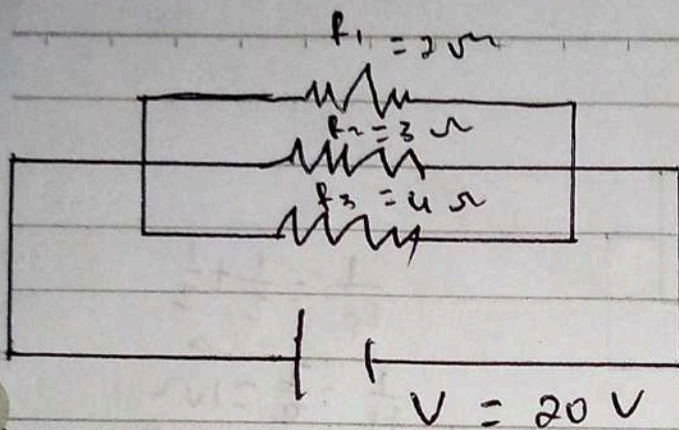
$$V_{R_2} = I \cdot R_2$$

$$V_{R_2} = \frac{V}{R_1 + R_2 + R_3} \cdot R_2$$

$$V_{R_3} =$$

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

$$I = I_{R_1} = I_{R_2} = I_{R_3}$$



$$V_{R_1} = V_{R_2} = V_{R_3} = V$$

$$I_{R_1} = \frac{V}{R_1}$$

$$I = \frac{V}{R_t}$$

$$I_{R_2} = \frac{V}{R_2}$$

$$R_t = ?$$

$$I_{R_3} = \frac{V}{R_3}$$

$$\frac{1}{R_t} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}$$

$$\frac{1}{R_t} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}$$

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

$$= \frac{6}{12} + \frac{4}{12} + \frac{3}{12}$$

$$= \frac{13}{12} = 1.08$$

$$\frac{1}{R_t} = 1.08$$

$$R_t = \frac{1}{1.08} = 0.92$$

$$\frac{1}{R_t} = \frac{13}{12}$$

$$\frac{12}{R_t} = 13$$

$$12 = R_t \cdot 13$$

$$0.92 = R_t$$

$$I = \frac{V}{R_t}$$

$$= \frac{20}{1.08}$$

$$\frac{20}{0.92} = 21.73\text{ A}$$

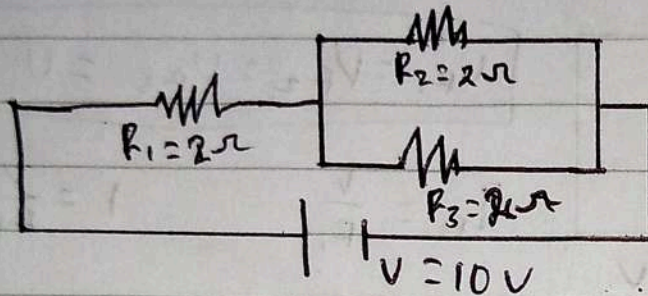
$$I_{R_1} = \frac{V}{R_1} = \frac{20}{2} = 10\text{ A}$$

$$I_{R_2} = \frac{V}{R_2} = \frac{20}{3} = 6.7\text{ A}$$

$$I_{R_3} = \frac{V}{R_3} = \frac{20}{4} = 5\text{ A}$$

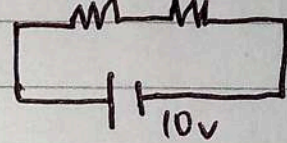
$$I = I_{R_1} + I_{R_2} + I_{R_3} = 21.7\text{ A}$$

* Hukum Kirchoof



$$\frac{1}{R_p} = \frac{1}{2} + \frac{1}{2}$$

$$\frac{1}{R_p} = \frac{2}{2} = 1 \Omega$$



$$I = \frac{V}{R_t}$$

$$R_t = 2 + 1 = 3 \Omega$$

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

$$I_{R_1} = 3.3 \text{ A}$$

$$I_{R_p} = 3.3 \rightarrow V_{R_p} = R_p \cdot I = 1 \cdot 3.3 = 3.3 \text{ Volt}$$

$$I_{R_2} = I_{R_3} = \frac{V_{R_p}}{R_2} = \frac{3.3}{2} = 1.65$$