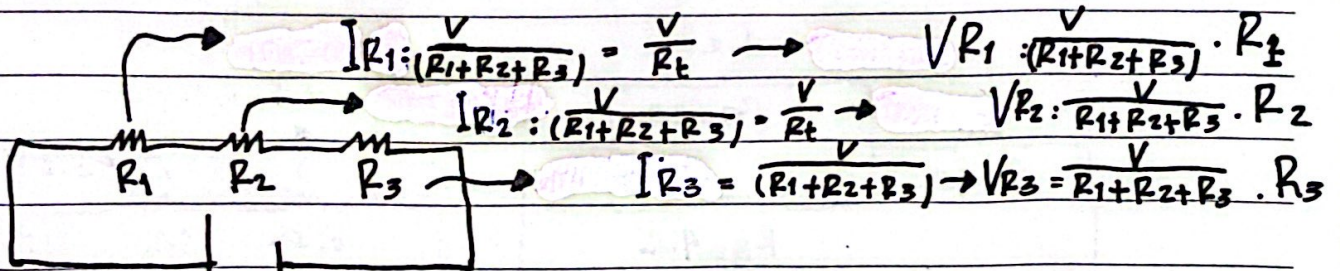
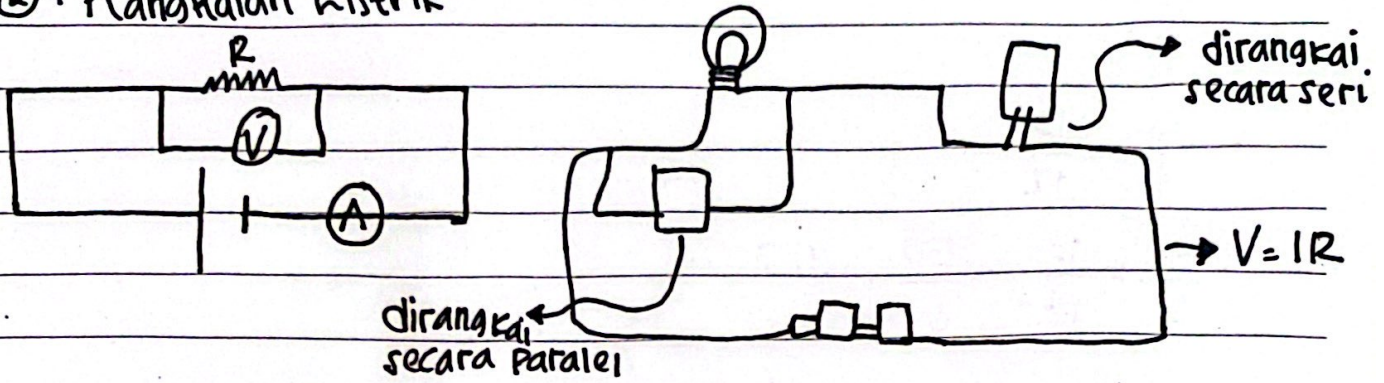


Elektrodinamika

①. Hukum Ohm

②. Rangkaian Listrik

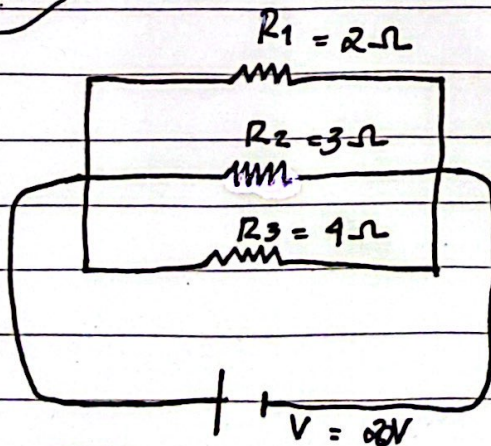


Catatan :

I V

Besar Arus pada rangkaian seri sama

$$I = \frac{V}{R_1 + R_2 + R_3}, \quad I = R_1 = R_2 = R_3$$



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

$$\left. \begin{aligned} I_{R_1} &= \frac{V}{R_1} = \frac{20}{2} = 10 \\ I_{R_2} &= \frac{V}{R_2} = \frac{20}{3} = 6,7 \\ I_{R_3} &= \frac{V}{R_3} = \frac{20}{4} = 5 \end{aligned} \right\} I = \frac{V}{R_t}$$

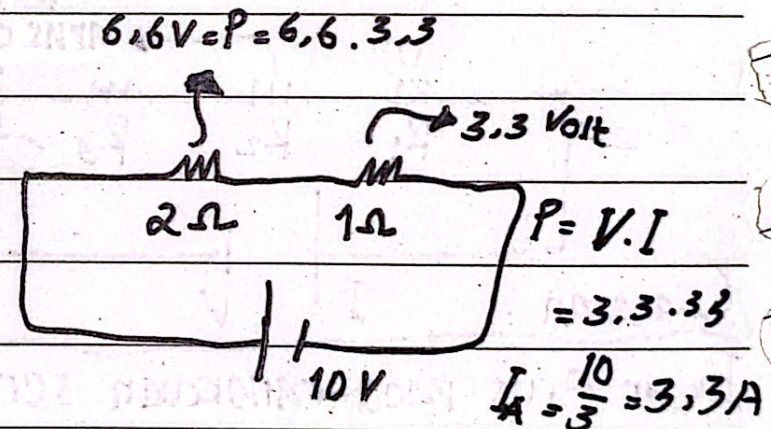
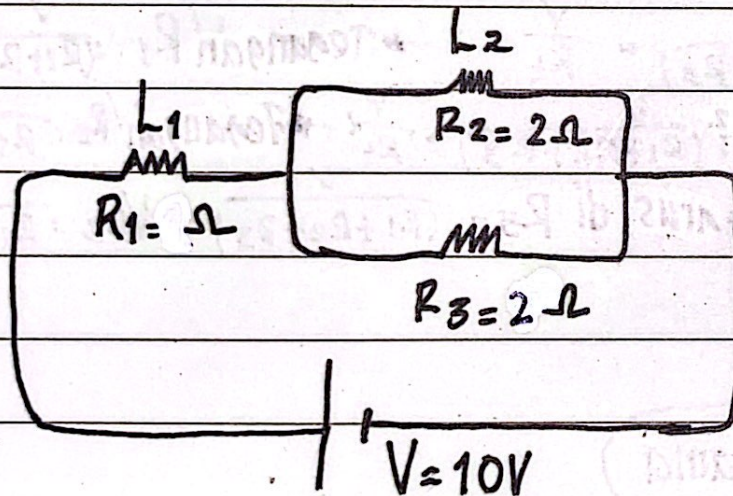
$$R_t = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3} = \frac{1}{2} + \frac{1}{3} + \frac{1}{4} = \frac{6+4+3}{12} = \frac{13}{12}$$

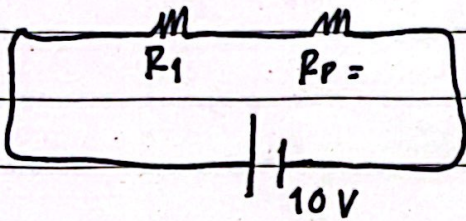
$$= \frac{V}{R_t}$$

$$= \frac{20}{\frac{12}{13}}$$

$$= \frac{20}{1} \cdot \frac{13}{12}$$

$$= \frac{20^{10}}{1} \times \frac{13}{12^6} = \frac{130}{6} = 21,7 \Omega$$





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

$$\Rightarrow I_{R2} = I_{R3} = \frac{V_{Rp}}{R2} = \frac{3,33}{2} = 1,665$$

$$\Rightarrow R_t = R1 + R_p = 2 + 1 = 3 \Omega$$

$$\Rightarrow I_t = \frac{V}{R_t} = \frac{10}{3} = 3,33 A$$

$$\Rightarrow I_{R1} = 3,33 A$$

$$\Rightarrow I_{Rp} = 3,33 \rightarrow V_{Rp} = R_p \cdot I = 1 \cdot 3,3 = 3,3 \text{ Volt}$$