

Date 29-04-2024

Kalisma

Arus Listrik

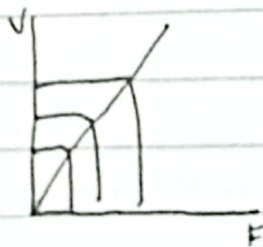
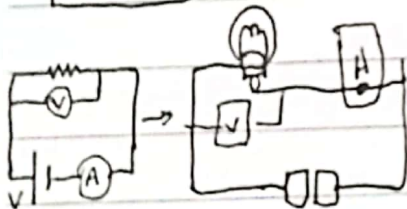
elektrodinamika

① hukum ohm

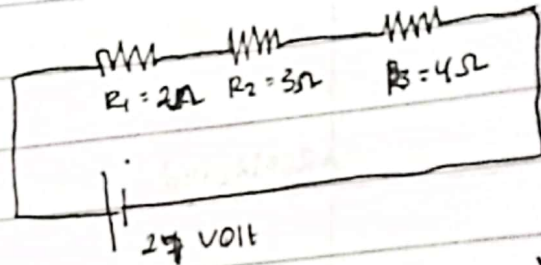
② Rangkaian Listrik

$$J = OE \rightarrow DC$$

$$V = IR \rightarrow AC$$



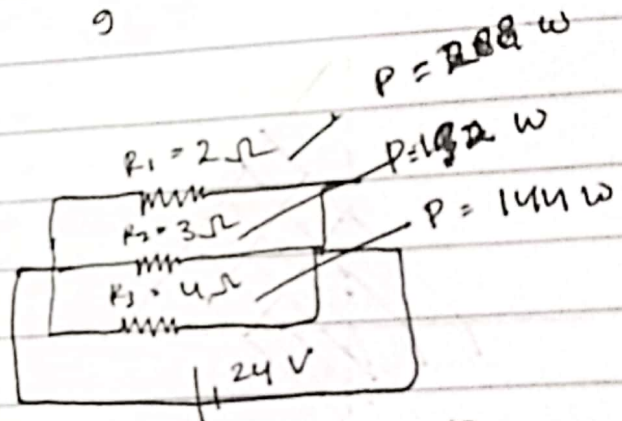
$$V = IR$$



$$R_t = 9 \Omega$$

$$I = \frac{24}{9} = 3 A$$

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



$$\text{Tegangan } R_1 \quad 24 / 2 = 12$$

$$R_2 \quad 24 / 3 = 8$$

$$R_3 \quad 24 / 4 = 6$$

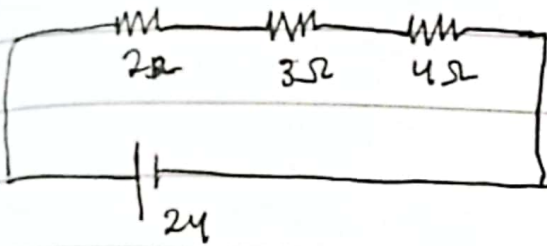
$$\text{arus} = 26 \rightarrow 12 + 8 + 6 = 26$$

$$R \text{ total} \rightarrow \frac{1}{2} + \frac{1}{3} + \frac{1}{4}$$

$$\rightarrow \frac{26}{24} = \frac{13}{12}$$

$$I = \frac{V}{R} = \frac{24}{\frac{12}{13}} = 26 A$$

Date



$$I = 2,67 \text{ A}$$

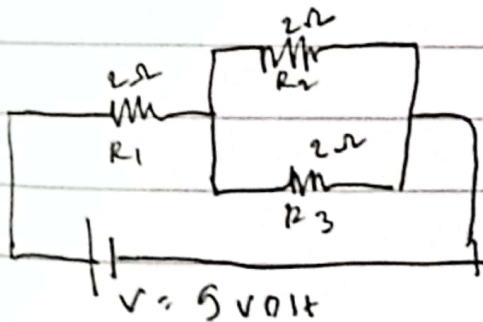
$$I_{R1} = 2,67$$

$$\text{Tegangan } R_1 = 5,34$$

$$\text{Daya } R_1 = 14,25 \text{ W}$$

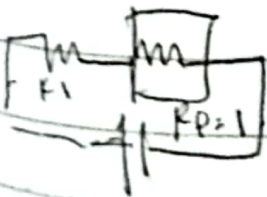
$$R_2 = 21,38 \text{ W}$$

$$R_3 = 28,51 \text{ W}$$



$$R_t = 3 \Omega \quad I = 3 \text{ A}$$

$$T. P_p = 3 \text{ W}$$



$$R_t = 5 \Omega$$

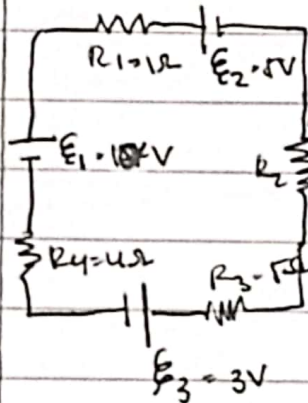
$$I = 3 \text{ A}$$

$$V_{Rp} = 1, R_p = 3 \quad I = 3 \text{ V}$$

$$V_{R2} = 3 \text{ V}$$

$$V_{R3} = 3 \text{ volt}$$

Hukum Kirchoof



$$E_1 > E_2 > E_3$$

1) Gambarkan arah arus sesuai dgn besarnya E

2) Gambar Loop Sesuka hatiku ♥

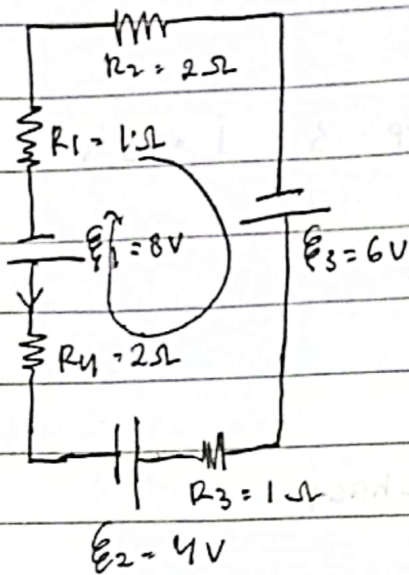
3) Jika arah arus searah dgn arah loop maka +.

$$\sum E + \sum I R = 0$$

$$-E_1 + E_2 + E_3 + I$$

$$(R_1 + R_2 + R_3) = 0$$

3) Jika arah arus searah dgn arah loop maka +.



Ans

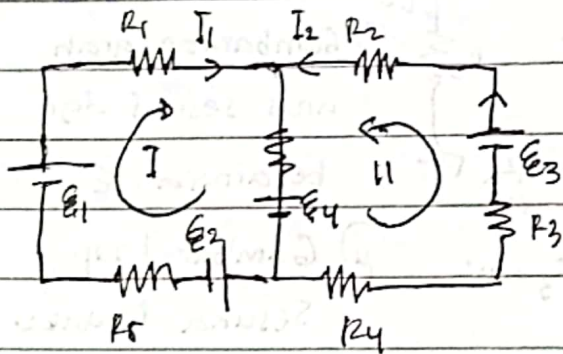
$$\sum \mathcal{E} + \sum I \cdot R = 0$$

$$\mathcal{E}_1 + \mathcal{E}_2 - \mathcal{E}_3 + I(R_1 + R_2 + R_3 + R_4) = 0$$

$$8 + 4 - 6 - I(1 + 2 + 1 + 2) = 0$$

$$6 - I(6) = 0$$

$$I = \frac{6}{6} = 1 \text{ A}$$



Loop I

$$\sum \mathcal{E} + \sum I \cdot R = 0$$

$$-\mathcal{E}_1 + \mathcal{E}_4 + \mathcal{E}_2 + I_1(R_1 + R_5) + I_3 R_6 = 0$$

Loop 2

$$\sum \mathcal{E} + \sum I \cdot R = 0$$

$$-\mathcal{E}_3 + \mathcal{E}_4 + I_2(R_2 + R_3 + R_4) + I_3 R_6 = 0$$