29/04 2024

No.

Date

Kalisma.

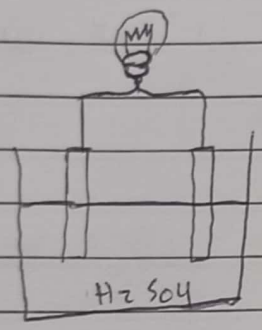
Elektrodinamika

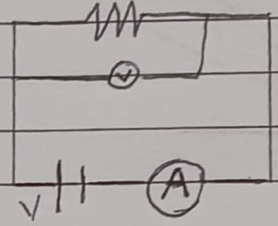
1. hukum Ohm
2. Rangkaian listrik.

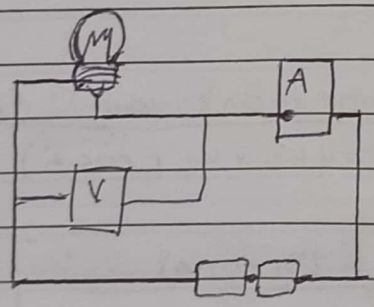
Pembahasan

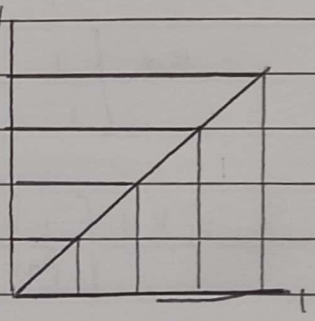
$J = \sigma E$ DC

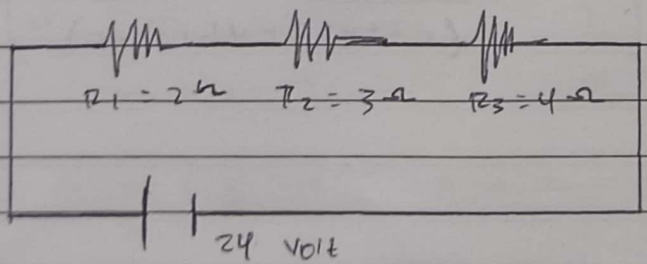
$V = I R$ AC









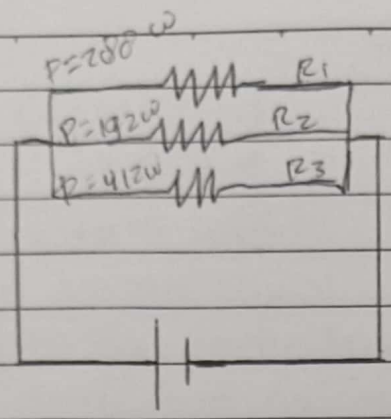


$R_t = 9\ \Omega$

$I = \frac{27}{9} = 3\ A$

No.

Date



$R_1 = 2\ \Omega$

$R_2 = 3\ \Omega$

$R_3 = 4\ \Omega$

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

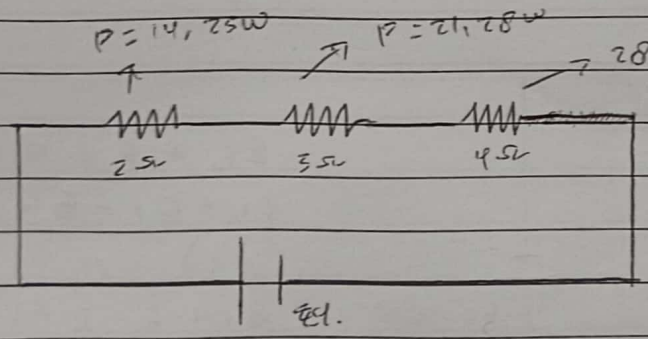
$$\frac{1}{R} = \frac{12 + 8 + 6}{24}$$

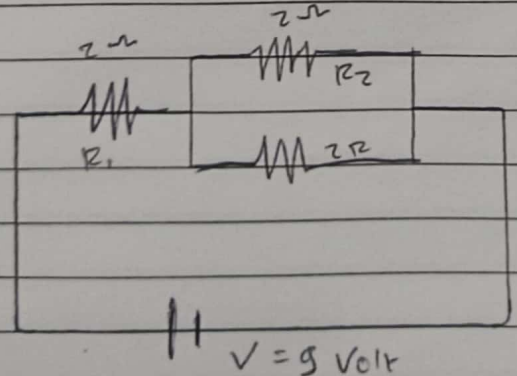
$$\frac{1}{R_t} = \frac{26}{24}$$

$$R_b = \frac{12}{13} \qquad I = \frac{V}{R}$$

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

$$= 26\ A.$$





$R_{tot} = 3\ \Omega$

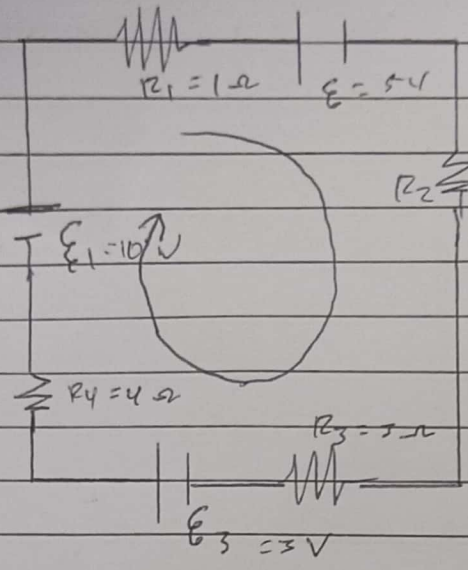
$I = 3\ A$

$V_{RP} = I \cdot R_P = 3 \cdot 1 = 3$ volt

$V_{R_2} = 3$ volt

$V_{R_3} = 3$ volt

Date



$\varepsilon_1 > \varepsilon_2 > \varepsilon_3$

1. Gambar arah arus sesuai dengan besarnya ε
2. Gambar lup sesuka hati
3. Jika arah arus searah dengan arah lup maka +

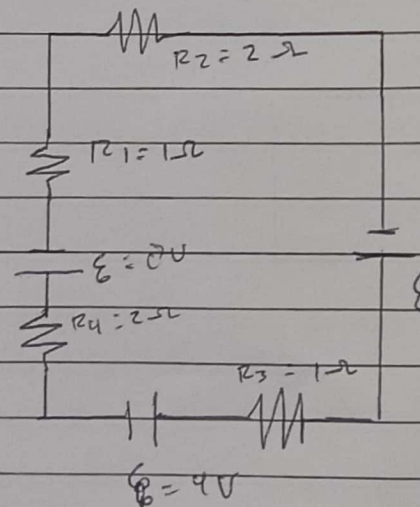
$= -10 + 5 + 3 + I\,(1+2+3+4) = 0$

$= -2 + I\,10 = 0$

$I\,(10) = 2$

$I = \frac{2}{10}$

$I = 0{,}2$ A.



$\Sigma\varepsilon + \Sigma I \cdot R = 0$

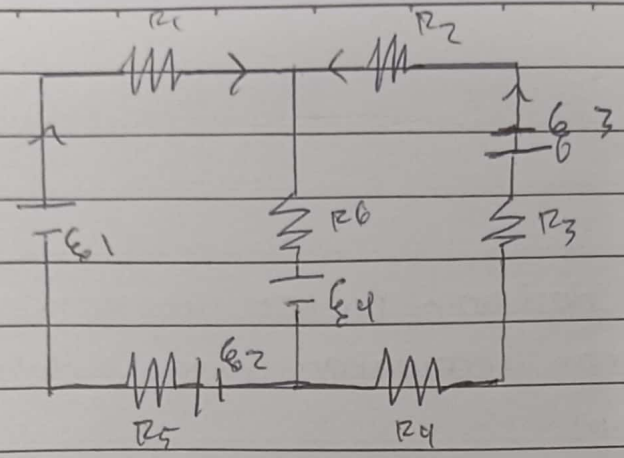
$\varepsilon_1 + \varepsilon_2 - \varepsilon_3 - I(R_1 + R_3 + R_5 + 4) = 0$

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

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

$I = \frac{6}{6}$

$= 1$ A.



loop I

$\varepsilon_6 + \varepsilon_I R = 0$

$-\varepsilon_1 + \varepsilon_4 + \varepsilon_2 + I_1(R_1 + R_5) + I_3 R_6 = 0$

loop 2

$\varepsilon_8 + \varepsilon \cdot I \cdot R = 0$

$-\varepsilon_3 + \varepsilon_4 + I_2(R_2 + R_3 + R_4) I_3 R_6 = 0$