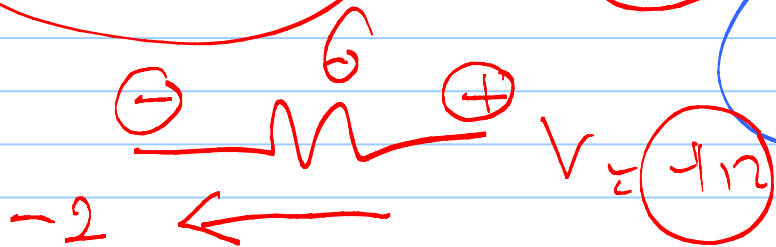
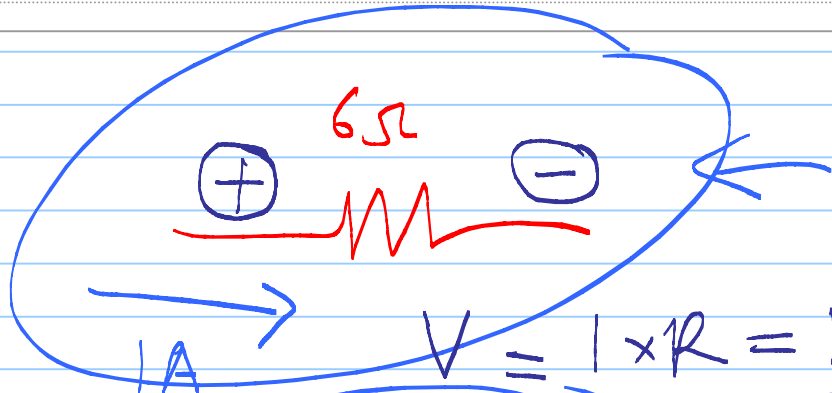


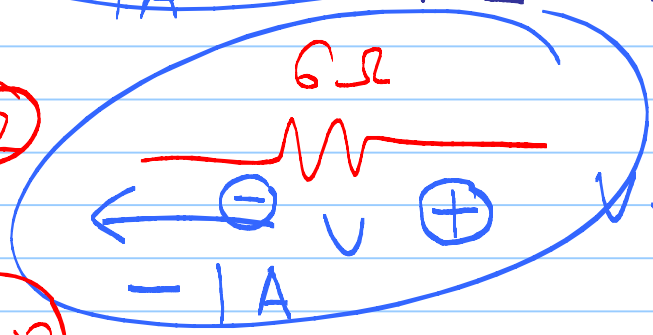
$V = -12$



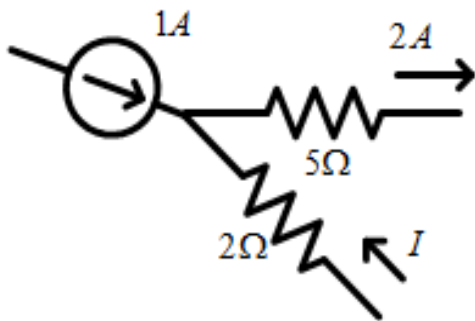
$V = -12$



$V = 1 \times R = 1 \times 6 = 6\text{V}$



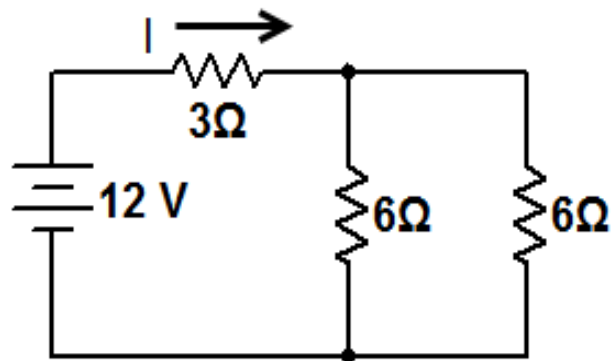
$V = 1 \times R = -1 \times 6 = -6\text{V}$



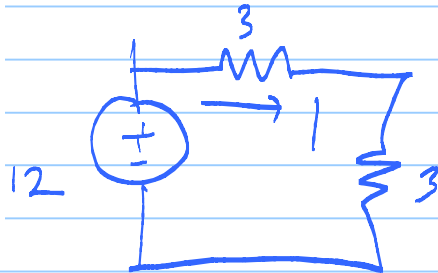
$$\sum I_{\text{masuk}} = \sum I_{\text{keluar}}$$

$$1 + I = 2$$

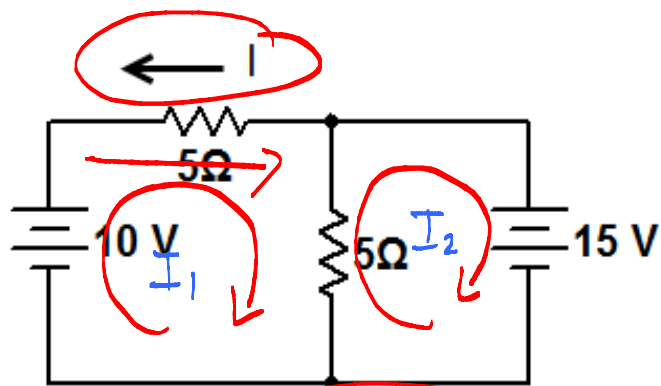
$$I = 2 - 1 = 1A$$



$$R_p = \frac{6 \times 6}{6 + 6} = 3$$



$$I = \frac{12}{3 + 3} = \frac{12}{6} = 2A$$



$$I = +1A$$

$$\text{Loop } I_1: -10 + 5I_1 + 5(I_1 - I_2) = 0$$

$$\text{Loop } I_2: +15 + 5(I_2 - I_1) = 0$$

substitu & elimini:

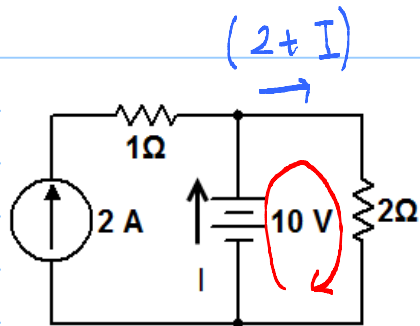
$$-10 + 10I_1 - 5I_2 = 0$$

$$10I_1 - 5I_2 = 10$$

$$-5I_1 + 5I_2 = -15$$

$$5I_1 = -5 \rightarrow$$

$$I_1 = -1A$$



$$\sum V = 0$$

$$-10 + 2(2+I) = 0$$

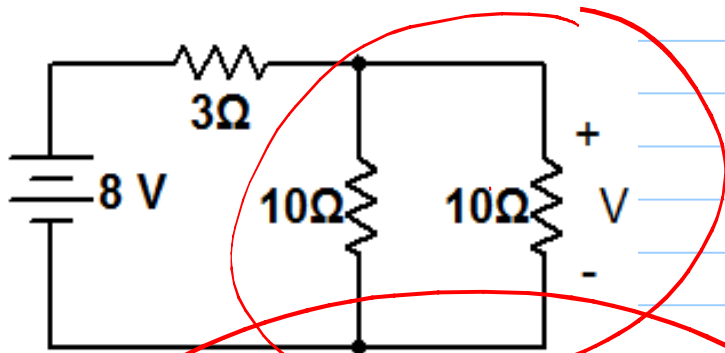
$$-10 + 4 + 2I = 0$$

$$2I = 6 \rightarrow I = 3 \text{ A}$$

Bicara part. arus ! \rightarrow Hk. Kuruh I
 part. teg 1 \rightarrow Hk. Kuruh II

: lintas terdudup

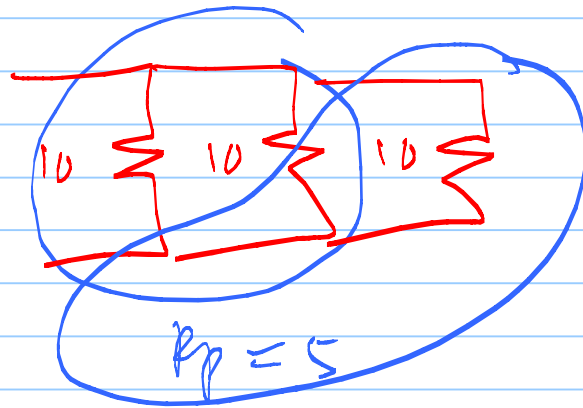
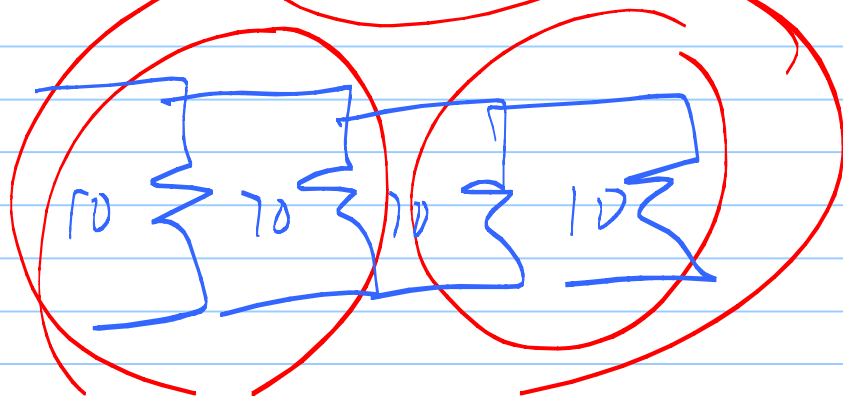
Titik robang



10

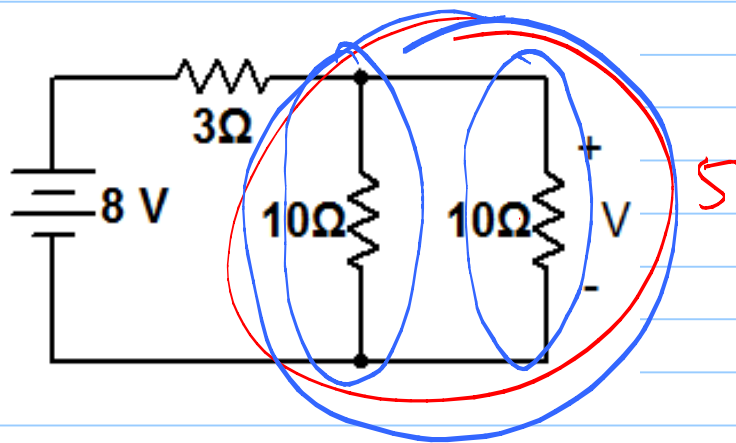
$$\frac{1}{R_p} = \frac{1}{10} + \frac{1}{10} \text{ lupakan}$$

$$R_p = \frac{10 \times 10}{10 + 10} = 5$$

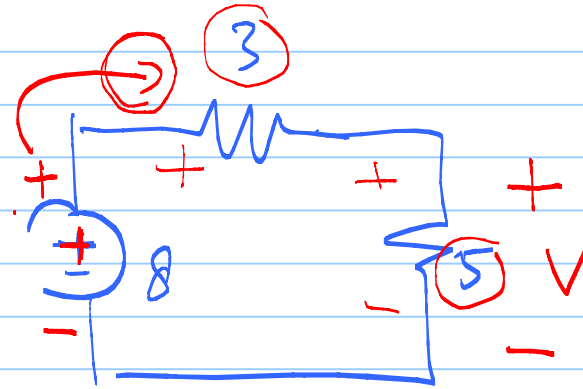


$$R_p = \frac{10 \times 10 \times 10}{10 + 10 + 10} \quad \text{X}$$

$$R_p = \frac{5 \times 10}{5 + 10} =$$



Parallel = $\frac{1}{R_s}$

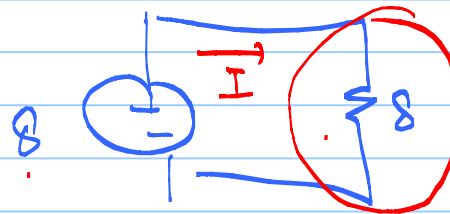


Seri berlainan
paralel sama gauge

$$V = + \frac{5}{5+3} \times 8$$

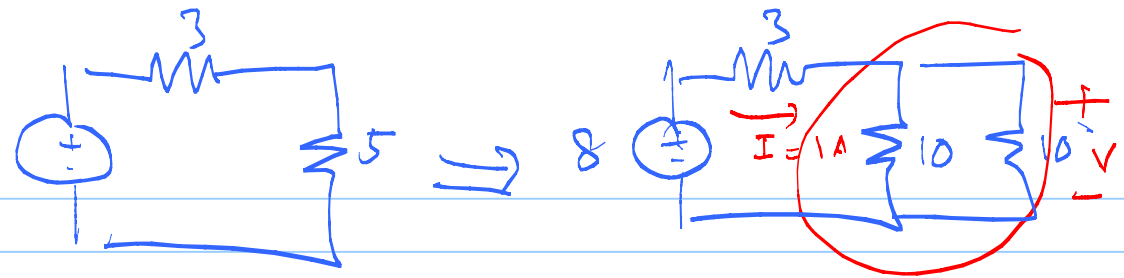
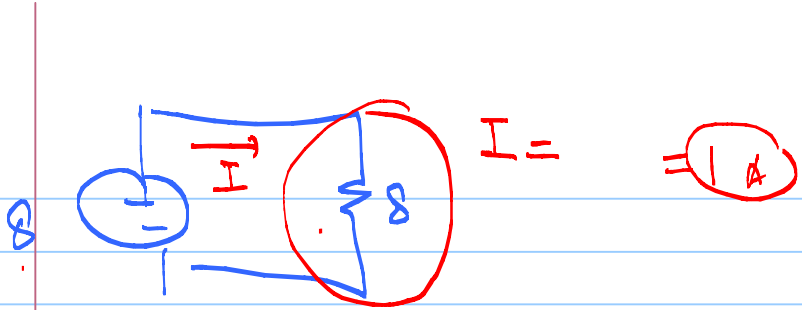
$$R_s = 3 + 5 = 8$$

$$V = +5 \text{ Volt}$$

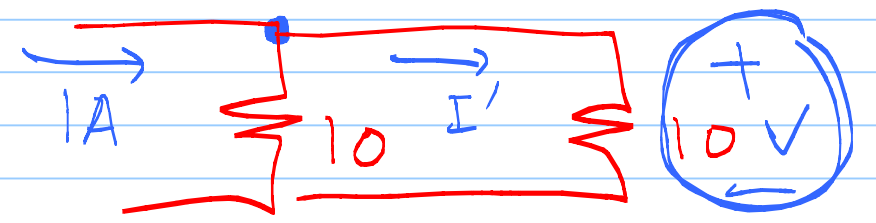


$$I = \frac{8}{8} = 1 \text{ A}$$

$$V = I \times R = 1 \times 5 = 5 \text{ Volt}$$

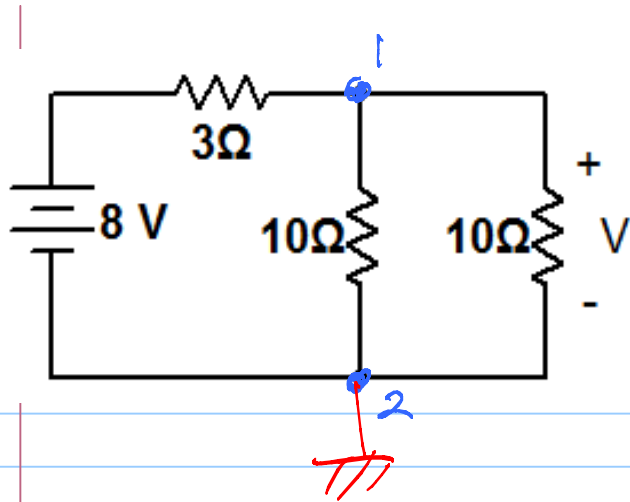


Paralel (pembagi arus)



$$I' = \frac{10}{10+10} \times 1 = \frac{1}{2}\text{A}$$

$$V = I \times R = \frac{1}{2} \times 10 = 5\text{Voh}$$



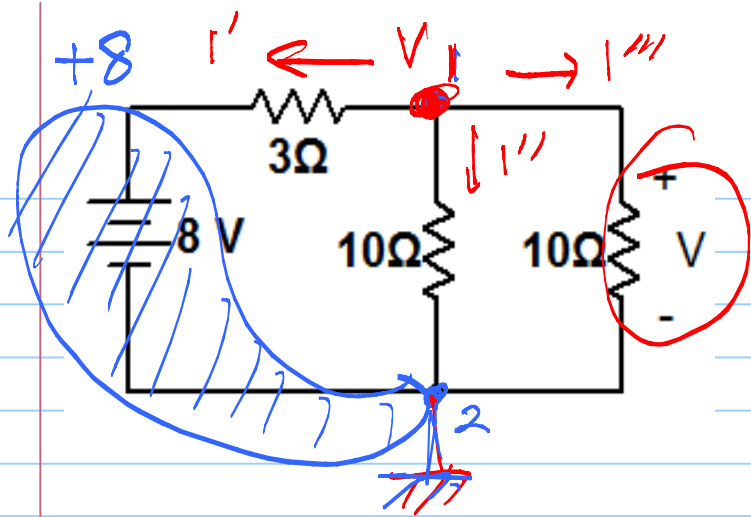
Analisa node

SOP :

1. Tentukan titik cabang (performs 3 elemen atau lebih)
2. Salah satu titik cabang / node dibuat ground

Tips : ground cari titik cabang yg paling banyak

3. Sisa node / titik cabang \rightarrow node voltage.
4. Analisa tiap node voltage. (asumsi titik tsb potensialnya paling tinggi)



Analisis V_1 :

$$\sum I_{\text{keluar}} = \sum I_{\text{masuk}}$$

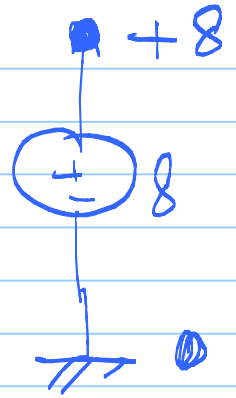
$$I' + I'' + I''' = 0$$

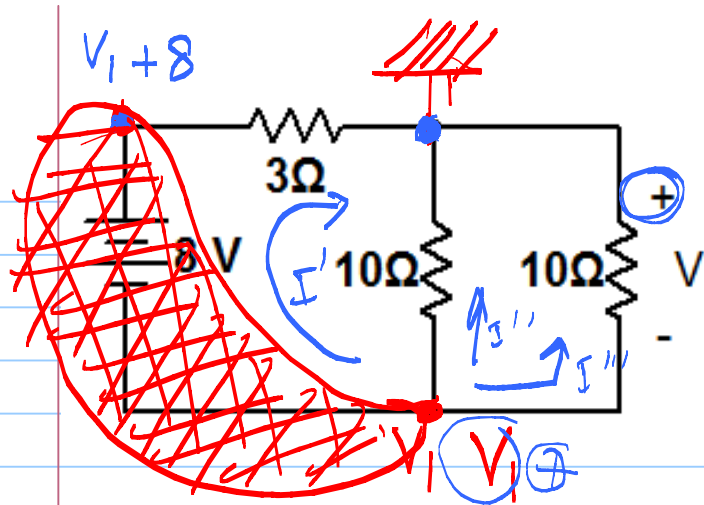
$$\frac{V_1 - 8}{3} + \frac{V_1 - 0}{10} + \frac{V_1 - 0}{10} = 0$$

$$10V_1 - 80 + 3V_1 + 3V_1 = 0$$

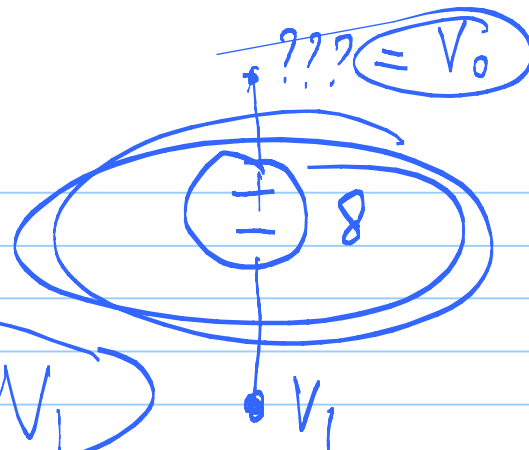
$$16V_1 = 80$$

$$V_1 = \frac{80}{16} = 5 \implies V = V_1 = \text{5 Volt}$$





$$V = -V_1$$



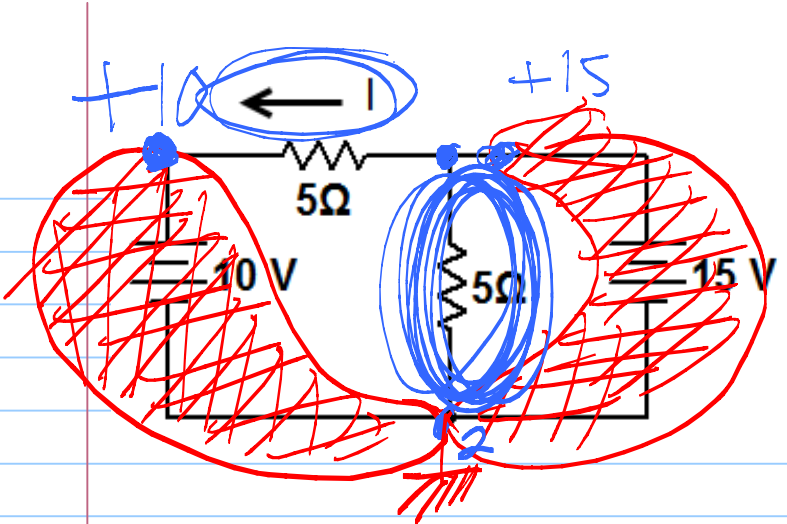
$$V_0 - V_1 = 3$$

$$V_0 = V_1 + 3$$

Analys node V_1

$$I' + I'' + I''' = 0$$

$$\frac{V_1 + 3 - 0}{3} + \frac{V_1 - 0}{10} + \frac{V_1 - 0}{10} = 0 \rightarrow V_1 = ???$$



$$I = \frac{V}{R} = \frac{V_h - V_L}{R} = \frac{15 - 10}{5} = 1A$$

