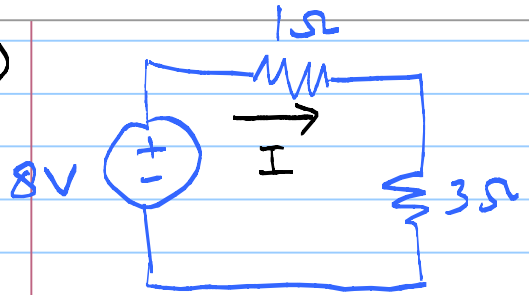
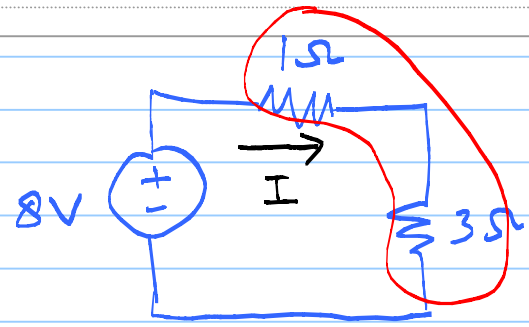


①



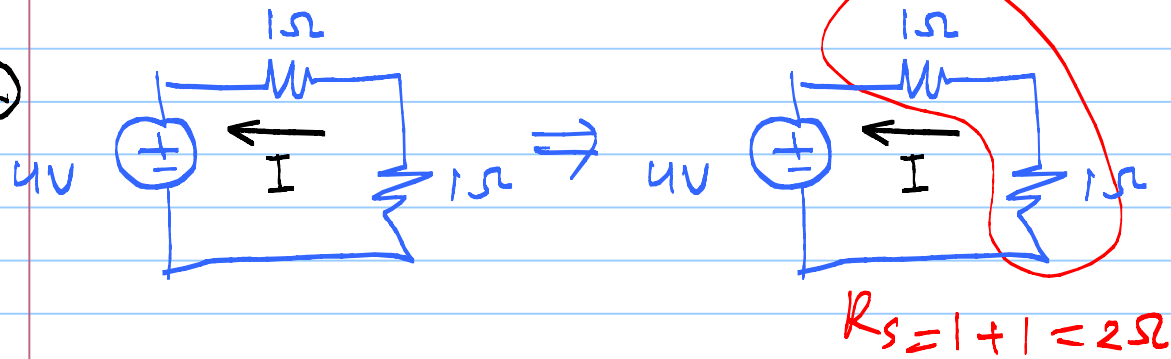
⇒



$$R_s = 1 + 3 = 4$$

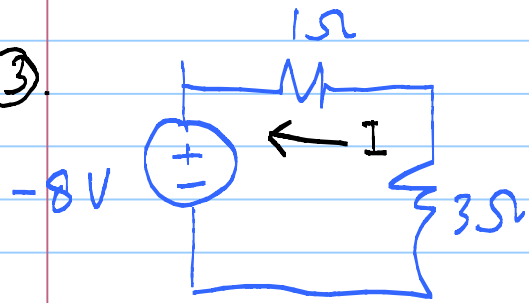
$$I = \frac{8}{4} = 2A$$

②

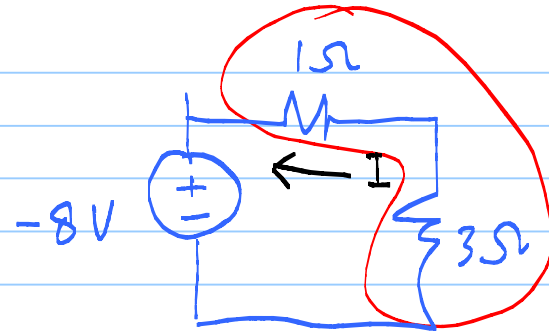


$$I = \frac{-4}{2} = -2A$$

③



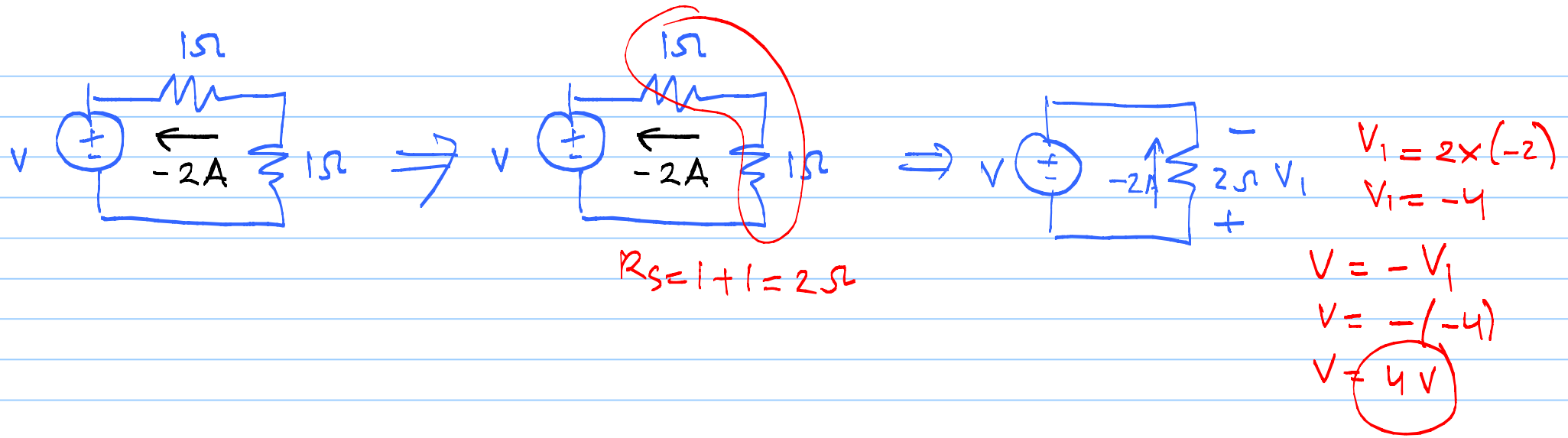
⇒



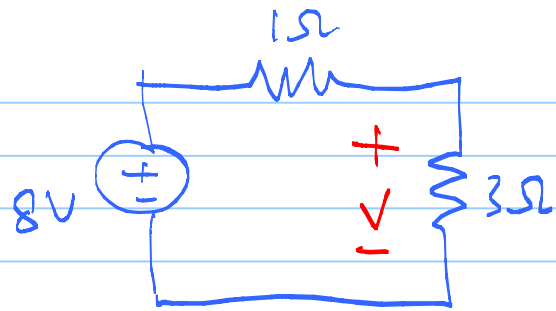
$$R_s = 1 + 3 = 4\Omega$$

$$I = \frac{-8}{4} = -2A$$

4



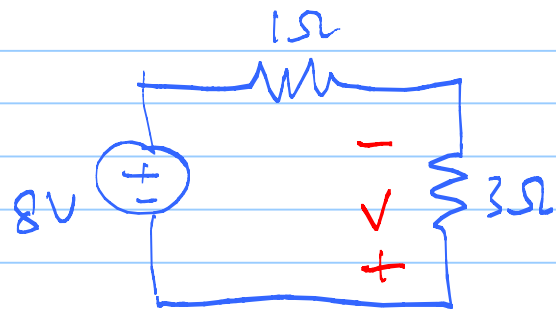
5



Pembagi Tegangan:

$$V = \frac{3}{3+1} \times 8 = 6V$$

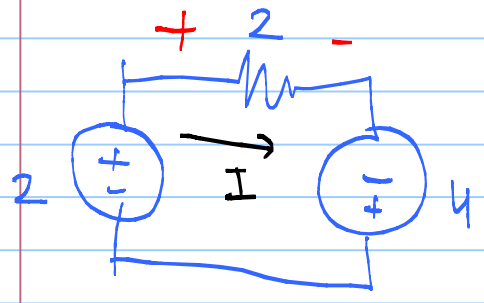
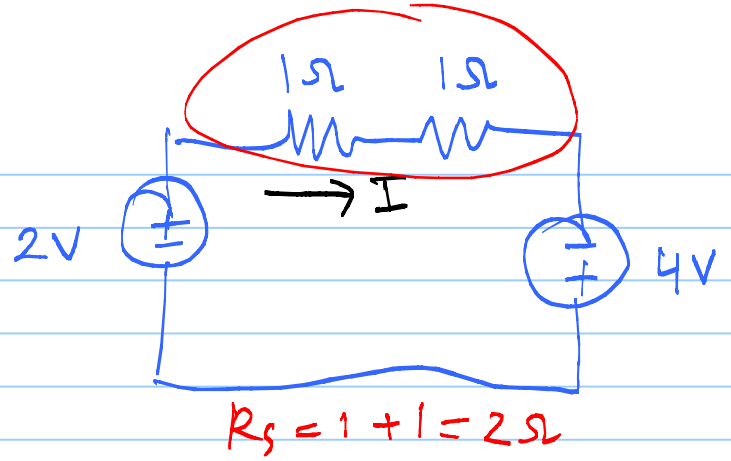
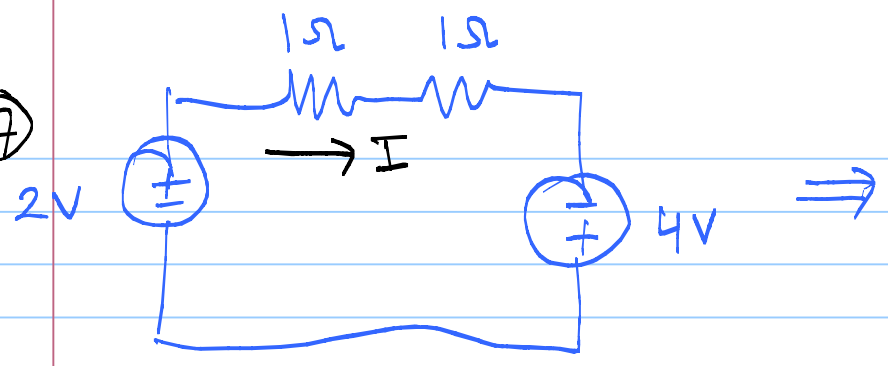
6



Pembagi Tegangan :

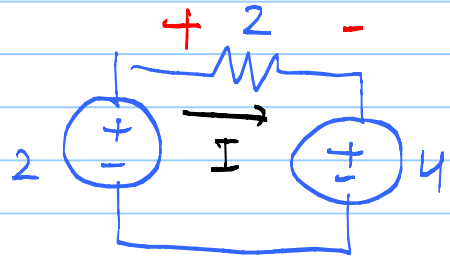
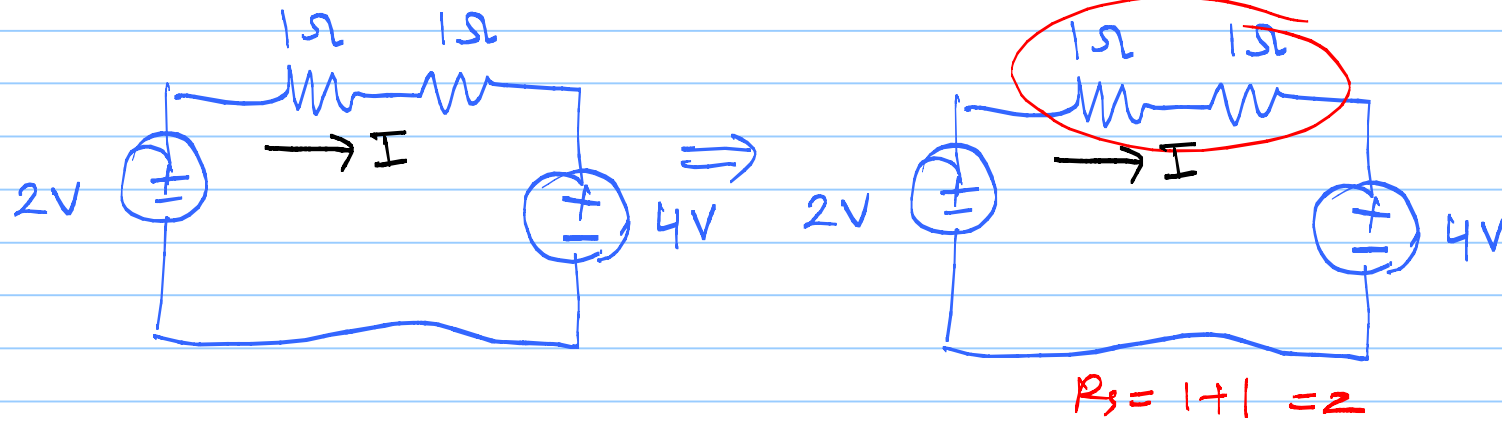
$$V = \frac{3}{3+1} \times (-8) = -6V$$

7



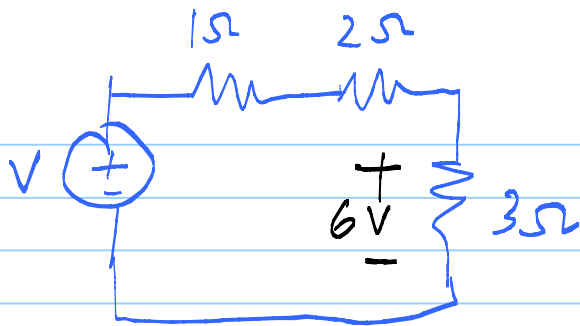
$$\begin{aligned} \Sigma V &= 0 \\ -2 + 2I - 4 &= 0 \\ 2I &= 6 \\ I &= 3A \end{aligned}$$

8



$$\begin{aligned} \sum V &= 0 \\ -2 + 2I + 4 &= 0 \\ 2I &= -2 \quad \Rightarrow \quad I = \textcircled{-1\text{A}} \end{aligned}$$

9

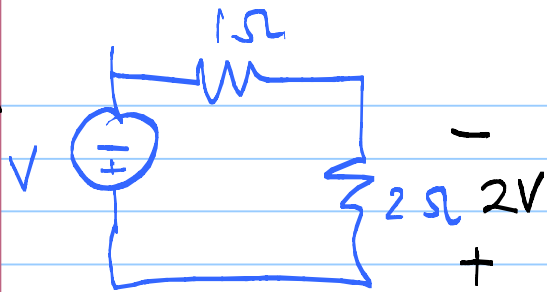


Pembagi Tegangan :

$$6 = \frac{3}{3+2+1} \times V$$

$$V = \frac{6 \times 6}{3} = 12V$$

10

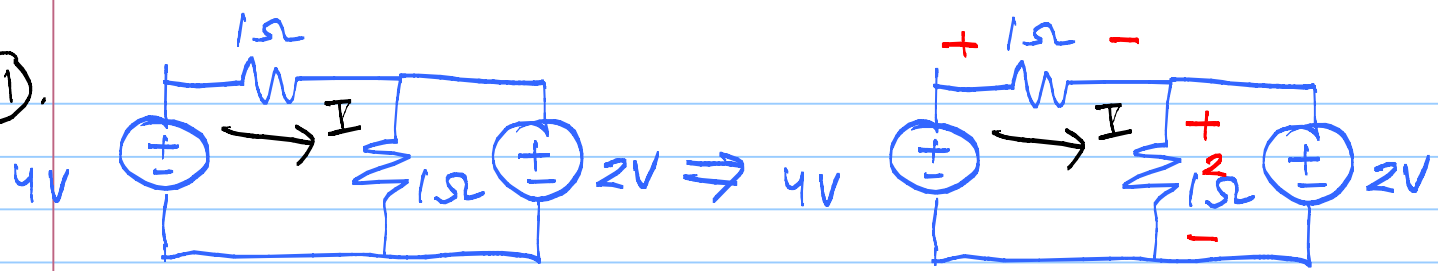


Pembagi Tegangan :

$$2 = \frac{2}{2+1} \times V$$

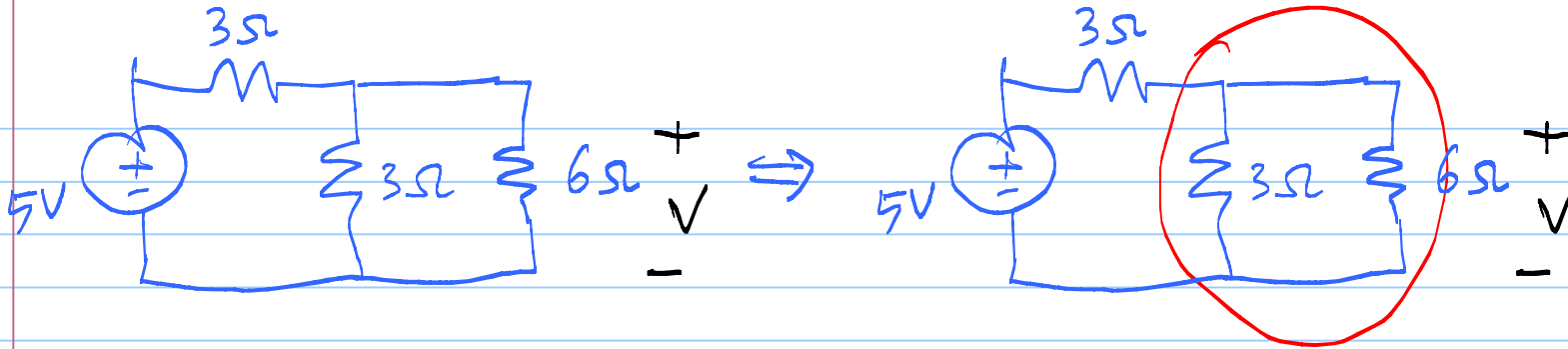
$$V = \frac{2 \times 3}{2} = 3V$$

11.

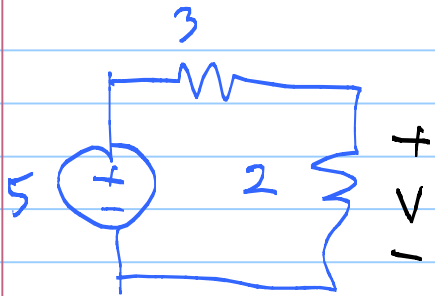


$$\begin{aligned} \sum V &= 0 \\ -4 + 1I + 2 &= 0 \\ I &= 2A \end{aligned}$$

12



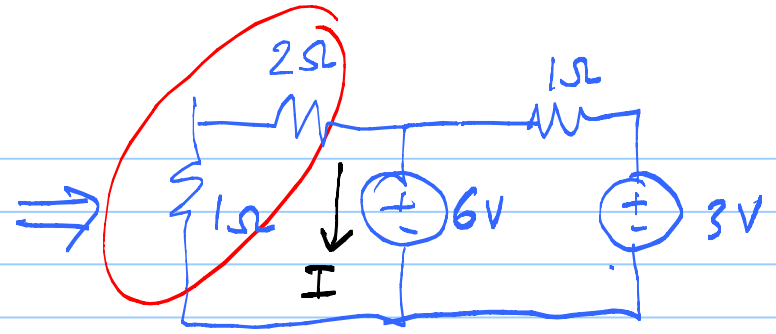
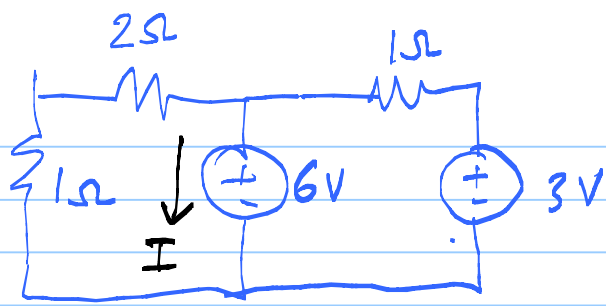
$$R_p = \frac{3 \times 6}{3 + 6} = 2 \Omega$$



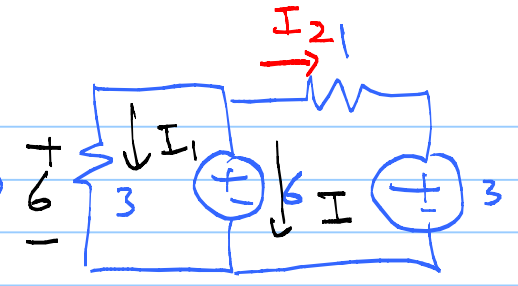
Pembagi tegangan :

$$V = \frac{2}{2 + 3} \times 5 = 2V$$

13



$$R_s = 1 + 2 = 3$$



$$I_1 = \frac{6}{3} = 2A$$

$$\sum V = 0$$

$$-6 + 1I_2 + 3 = 0$$

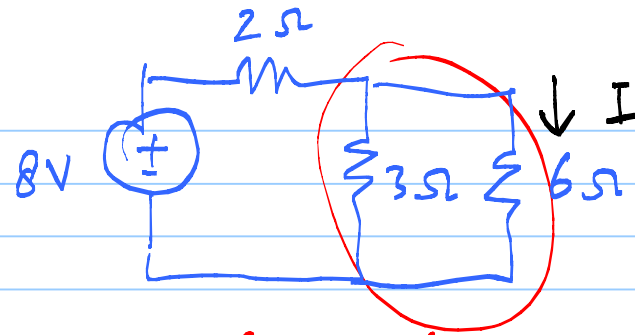
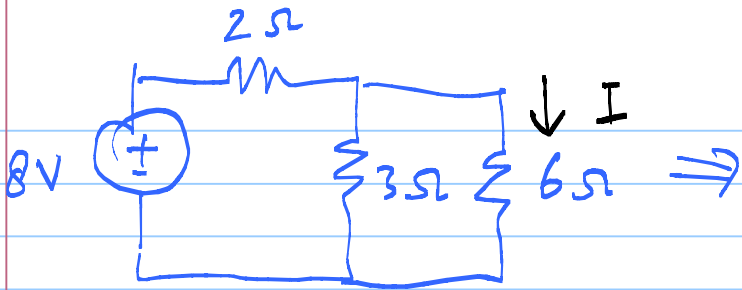
$$I_2 = 3A$$

$$\sum I = 0$$

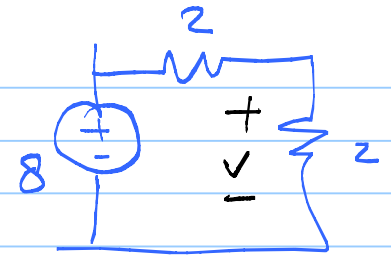
$$I_1 + I + I_2 = 0$$

$$I = -2 - 3 = -5A$$

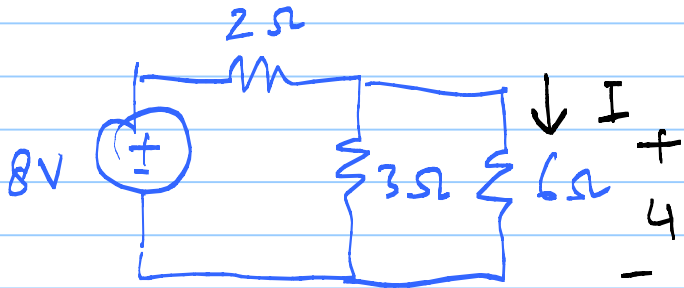
(14)



$$R_p = \frac{3 \times 6}{3 + 6} = 2$$

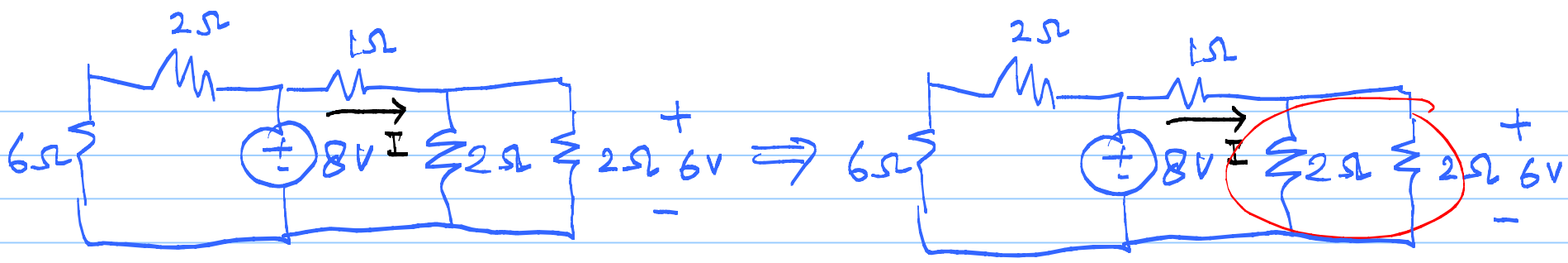


$$V = \frac{2}{2+2} \times 8 = 4$$

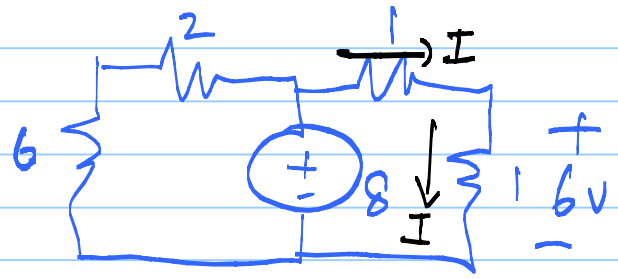


$$I = \frac{4}{2} = \frac{2}{3} \text{ A}$$

15

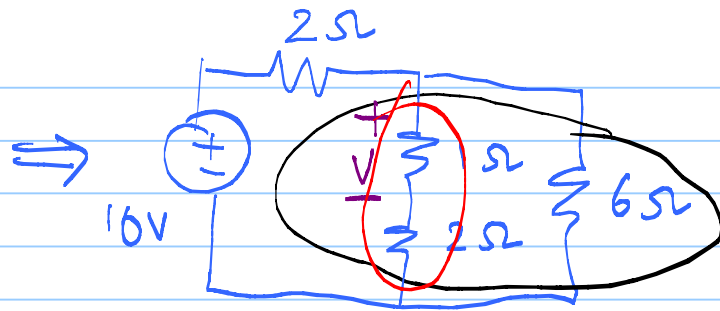
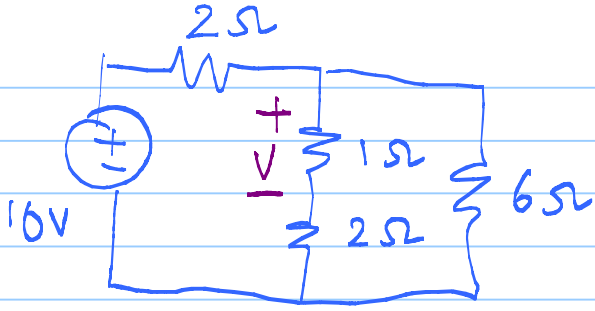


$$R_p = \frac{2 \times 2}{2 + 2} = 1$$



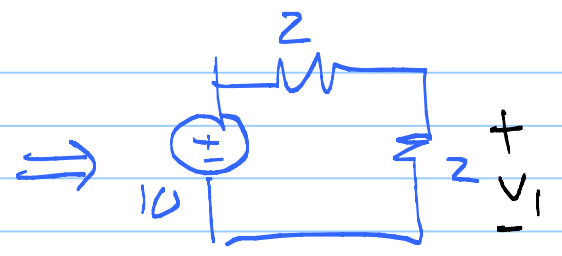
$$I = \frac{6}{1} = 6A$$

16

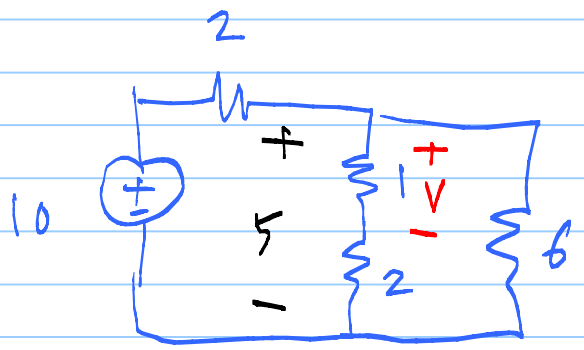


$$R_s = 1 + 2 = 3$$

$$R_p = \frac{3 \times 6}{3 + 6} = 2$$

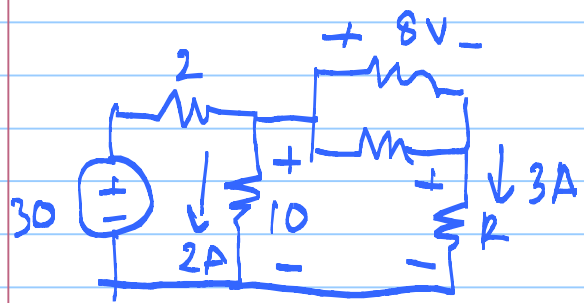
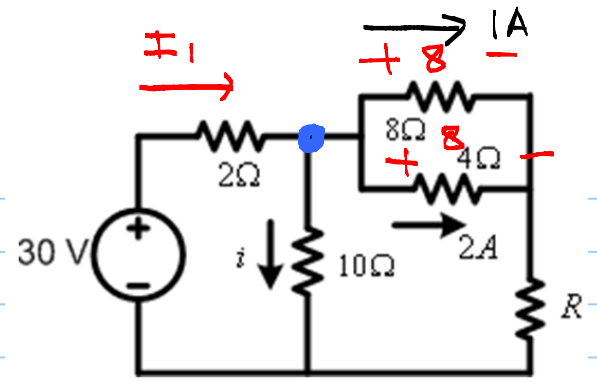
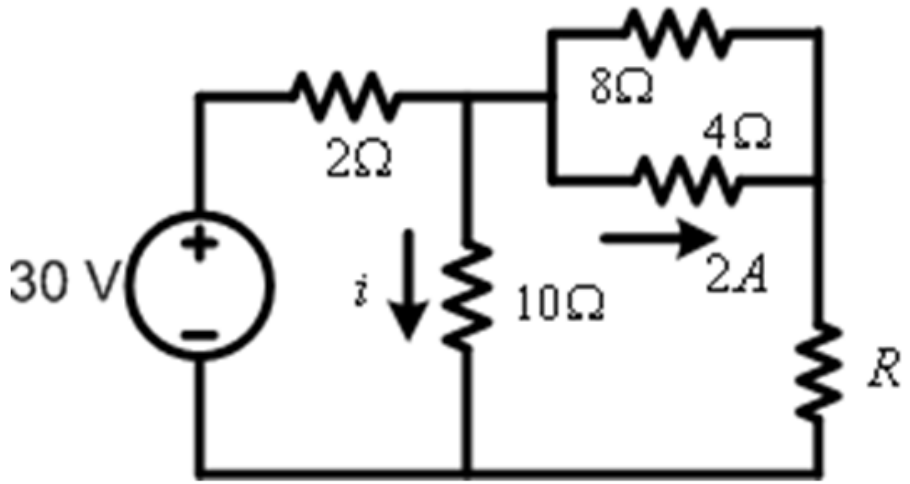


$$V_1 = \frac{2}{2 + 2} \times 10 = 5V$$



$$V = \frac{1}{1 + 2} \times 5 = \frac{5}{3}V$$

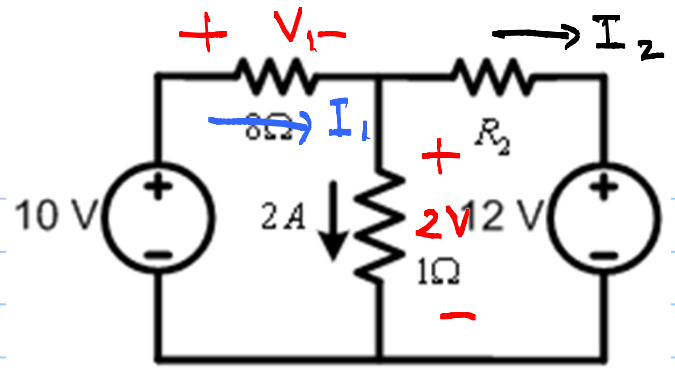
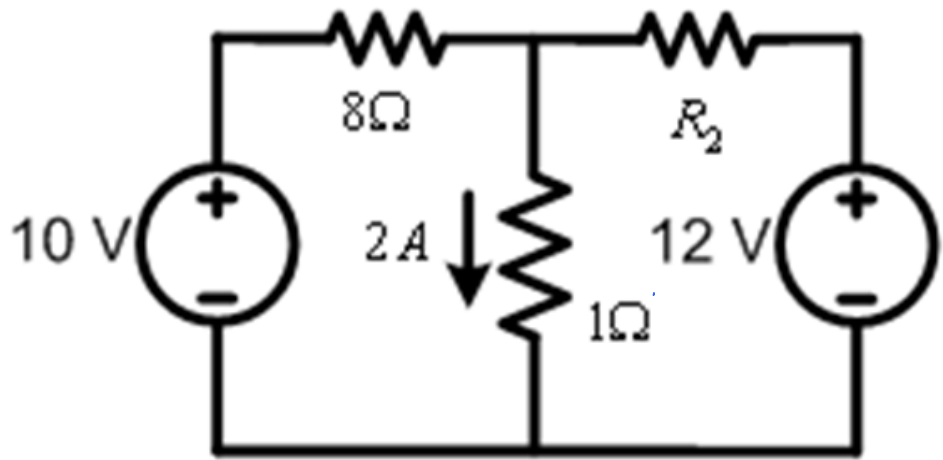
17



$$\begin{aligned} \sum v &= 0 \\ +3R - (2 \times 10) + 8 &= 0 \\ 3R - 20 + 8 &= 0 \\ 3R &= 12 \\ R &= 4\Omega \end{aligned}$$

$$\begin{aligned} \sum I &= 0 \\ I_1 &= i + 1 + 2 = (i + 3) \\ \sum v &= 0 \\ -30 + 2I_1 + 10i &= 0 \\ -30 + 2(i + 3) + 10i &= 0 \\ -30 + 2i + 6 + 10i &= 0 \\ 12i &= 24 \\ i &= 2A \end{aligned}$$

18



$$\sum V = 0$$

$$-10 + V_1 + 2 = 0$$

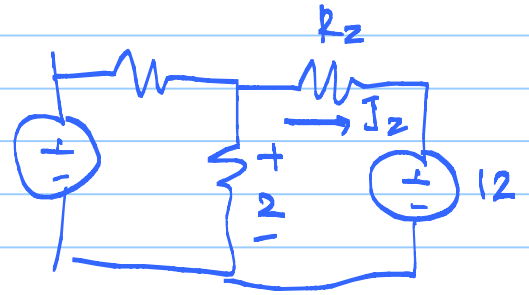
$$V_1 = 8$$

$$I_1 = \frac{V_1}{8} = \frac{8}{8} = 1A$$

$$\sum I = 0$$

$$I_1 = 2 + I_2$$

$$I_2 = 1 - 2 = -1A$$



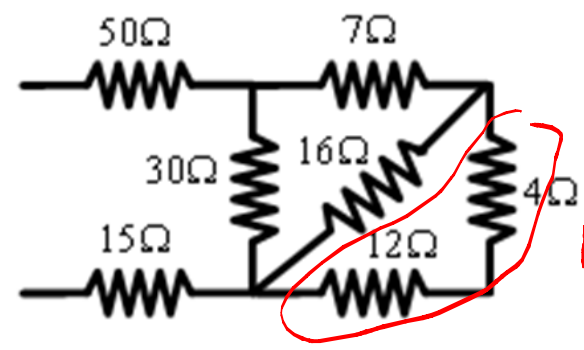
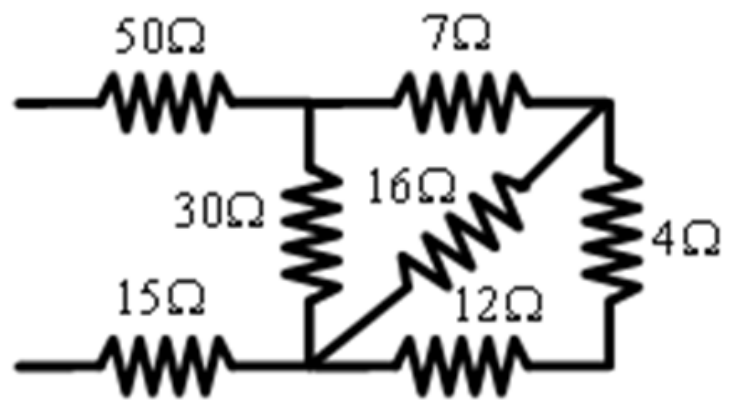
$$\sum V = 0$$

$$-2 + I_2 R_2 + 12 = 0$$

$$-2 - R_2 + 12 = 0$$

$$R_2 = 10\Omega$$

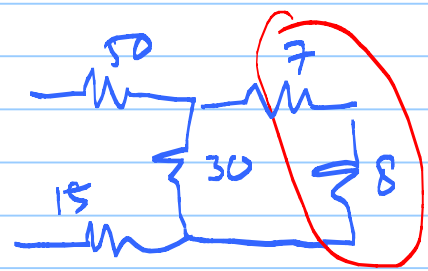
19



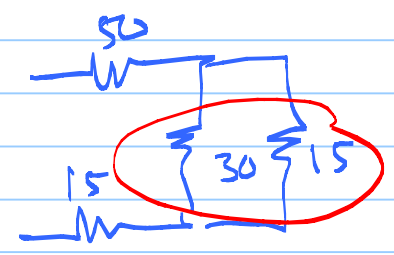
$$R_s = 12 + 4 = 16$$



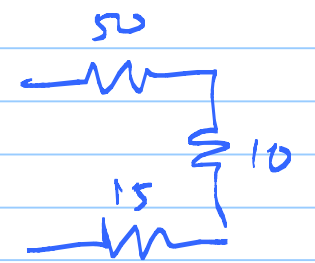
$$R_p = \frac{16 \times 16}{16 + 16} = 8$$



$$R_s = 7 + 8 = 15$$



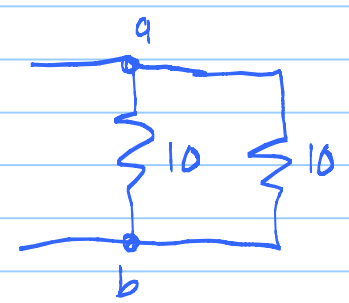
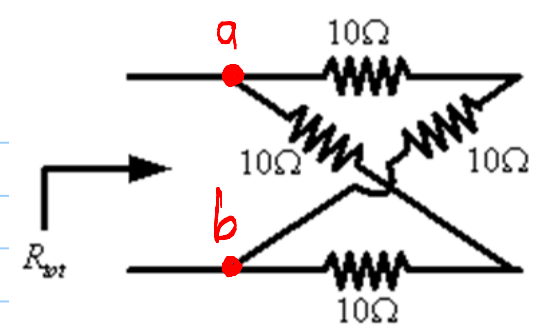
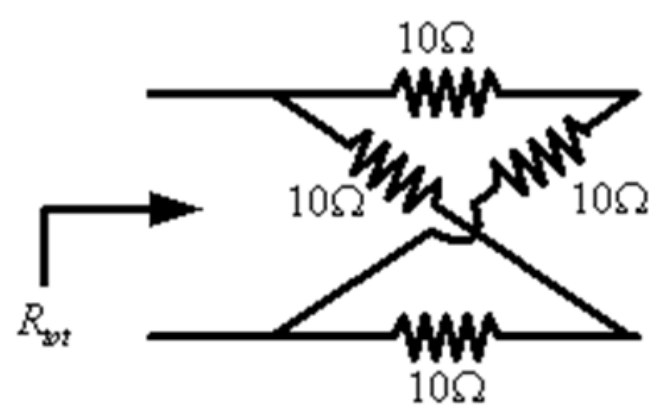
$$R_p = \frac{30 \times 15}{30 + 15} = 10$$



$$R_t = 50 + 10 + 15$$

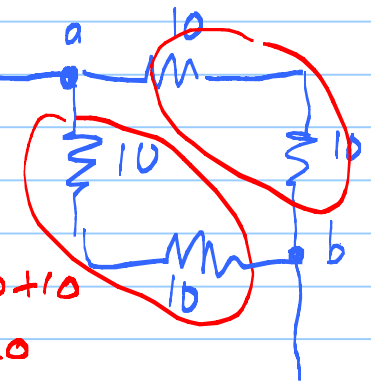
$$R_t = 75\Omega$$

20



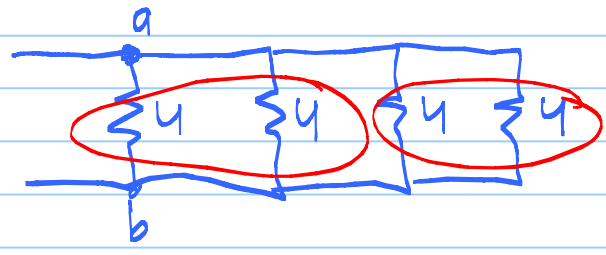
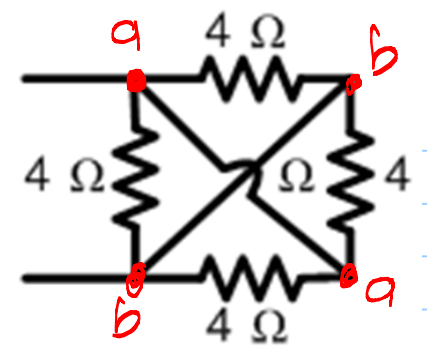
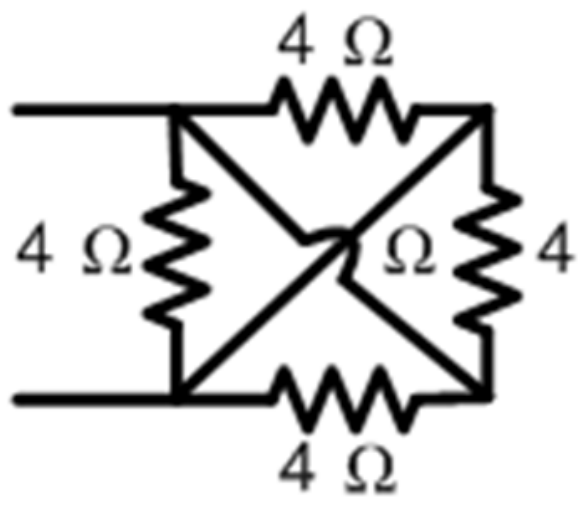
$$\Rightarrow R_p = \frac{10 \times 10}{10 + 10} = 5\Omega$$

$$R_s = 10 + 10 = 20$$



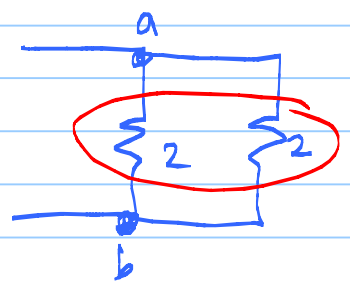
$$R_s = 10 + 10 = 20$$

21



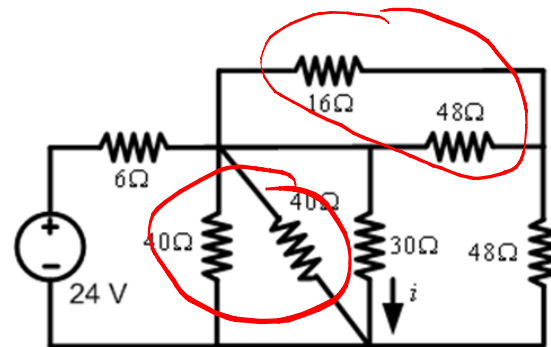
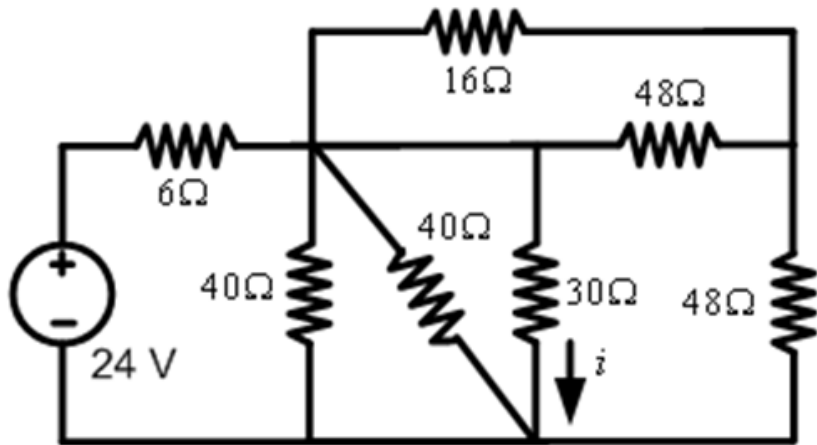
$$R_{p2} = \frac{4 \times 4}{4 + 4} = 2$$

$$R_{p1} = \frac{4 \times 4}{4 + 4} = 2$$



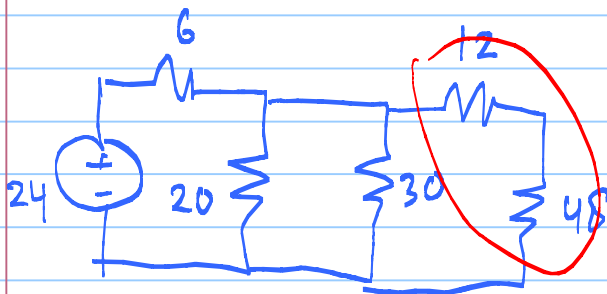
$$R_p = \frac{2 \times 2}{2 + 2} = 1 \Omega$$

22

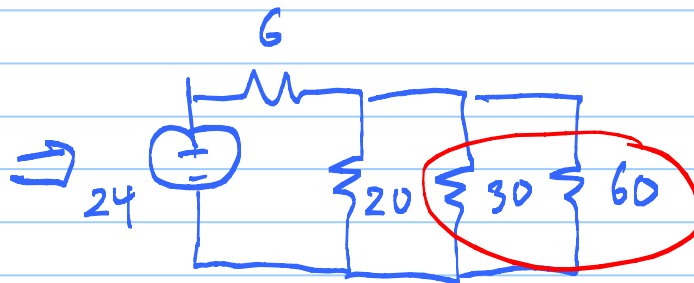


$$R_p = \frac{16 \times 48}{16 + 48} = 12$$

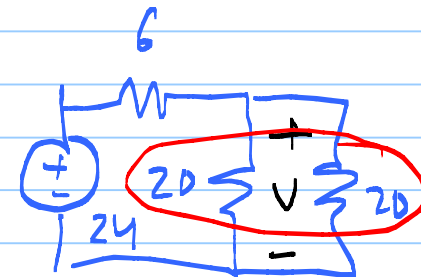
$$R_p = \frac{40 \times 40}{40 + 40} = 20$$



$$R_s = 12 + 48 = 60$$



$$R_p = \frac{30 \times 60}{30 + 60} = 20$$



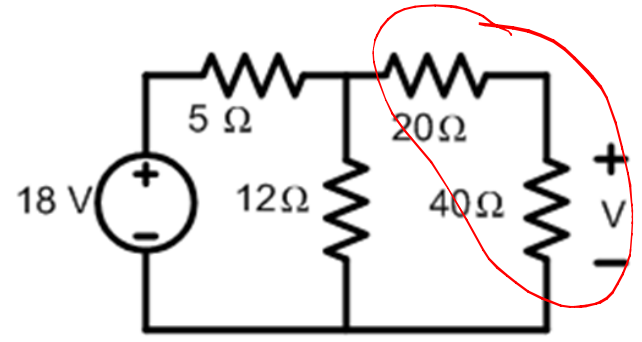
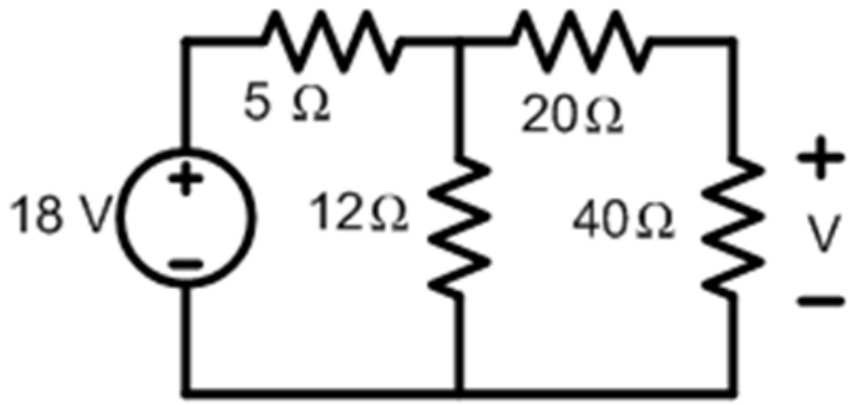
$$R_p = \frac{20 \times 20}{20 + 20}$$

$$R_p = 10$$

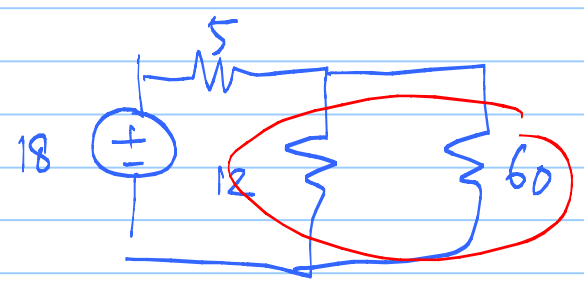
$$V = \frac{10}{10 + 6} \times 24 = 15V$$

$$i = \frac{V}{30} = \frac{15}{30} = 0.5A$$

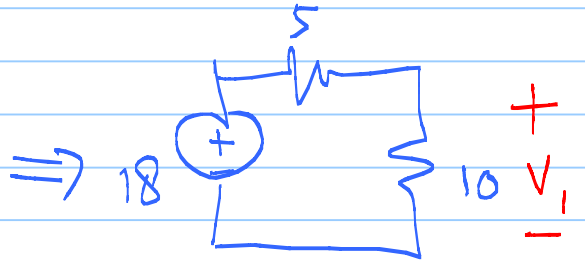
23



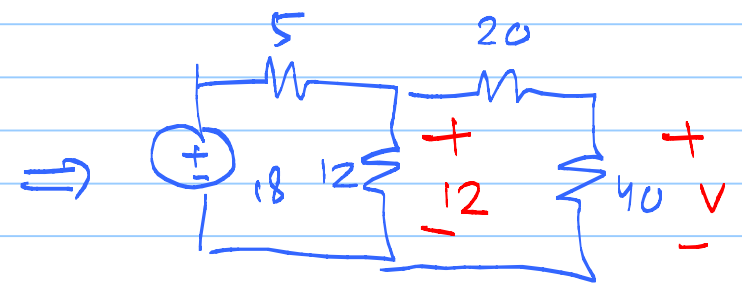
$R_s = 20 + 40$
 $R_s = 60 \Omega$



$R_p = \frac{12 \times 60}{12 + 60} = 10$

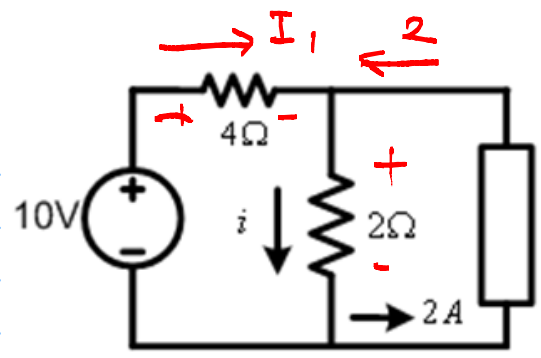
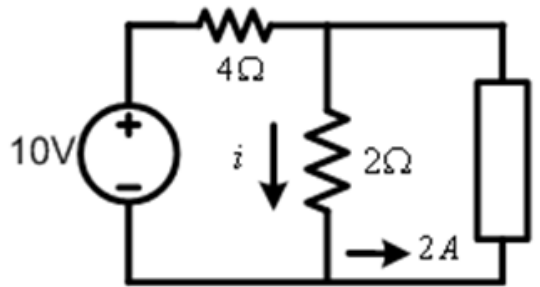


$V_1 = \frac{10}{10 + 5} \times 18 = 12$



$V = \frac{40}{40 + 20} \times 12 = 8V$

24



$$\sum I = 0$$

$$i = I_1 + 2$$

$$I_1 = (i - 2)$$

$$\sum V = 0$$

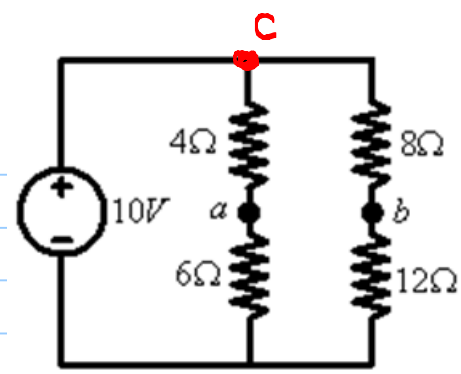
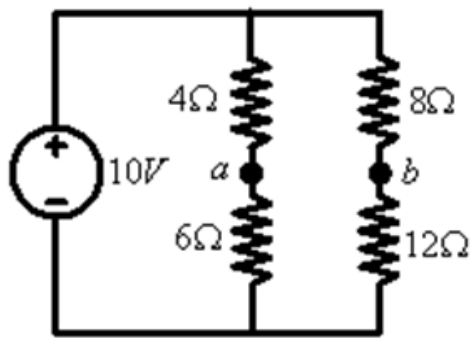
$$-10 + 4I_1 + 2i = 0$$

$$-10 + 4(i - 2) + 2i = 0$$

$$-10 + 4i - 8 + 2i = 0$$

$$i = \frac{18}{6} = 3A$$

25



$$V_{ca} = \frac{4}{4+6} \times 10 = 4V$$

$$V_{cb} = \frac{8}{8+12} \times 10 = 4V$$

$$V_{ab} = V_{ac} + V_{cb}$$

$$V_{ab} = -4 + 4 = 0V$$

