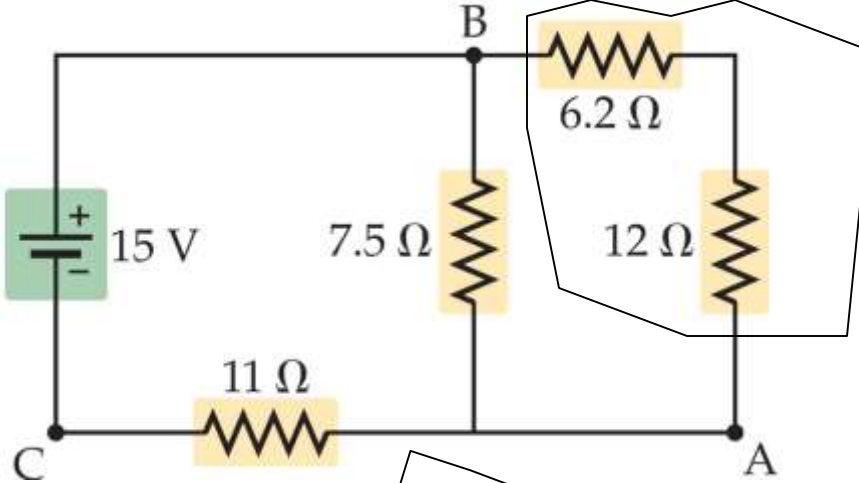
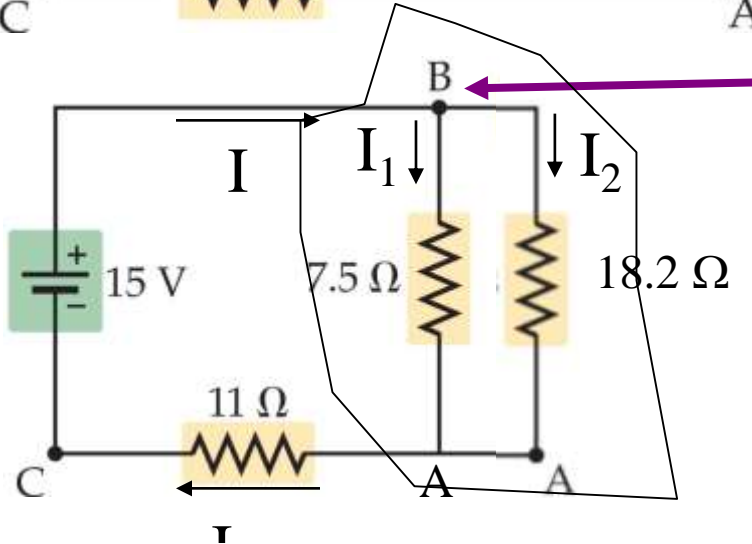


Prob 21-61-62-1 (9-14)



$$R1_{\text{eff}} = 6.2 + 12 = 18.2$$

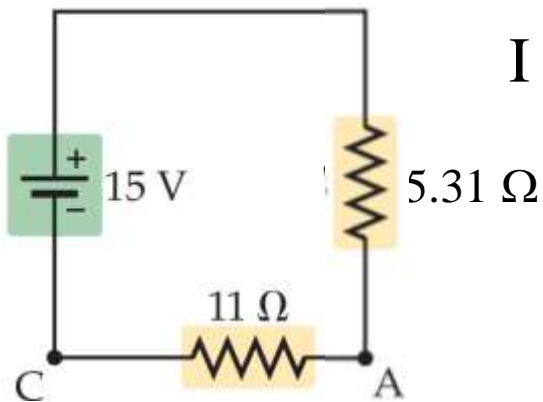


$$I = I_1 + I_2$$

$$R2_{\text{eff}} = 6.2 + 12 = 18.2$$

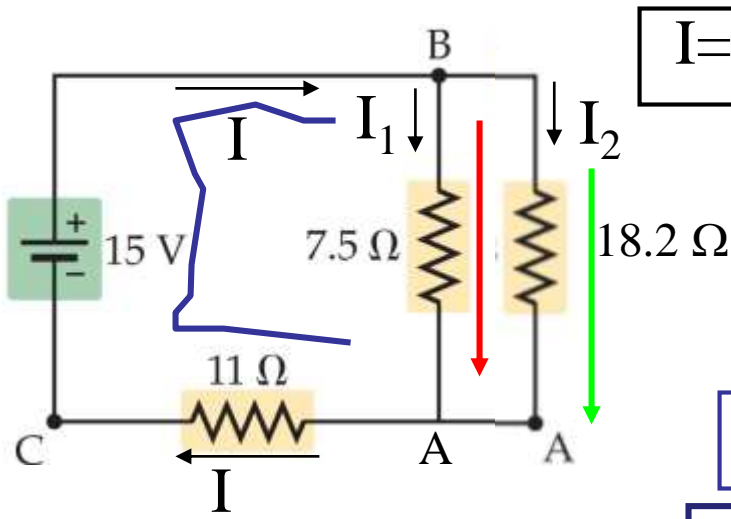
$$\frac{1}{R2_e} = \frac{1}{7.5} + \frac{1}{18.2} = 0.188$$

$$R2_e = \frac{1}{0.188} = 5.31\Omega$$



$$I? \quad 15 = (11 + 5.31) I = 16.3 I$$

$$I = 15 / 16.3 = 0.92 \text{ A}$$



$$I = I_1 + I_2$$

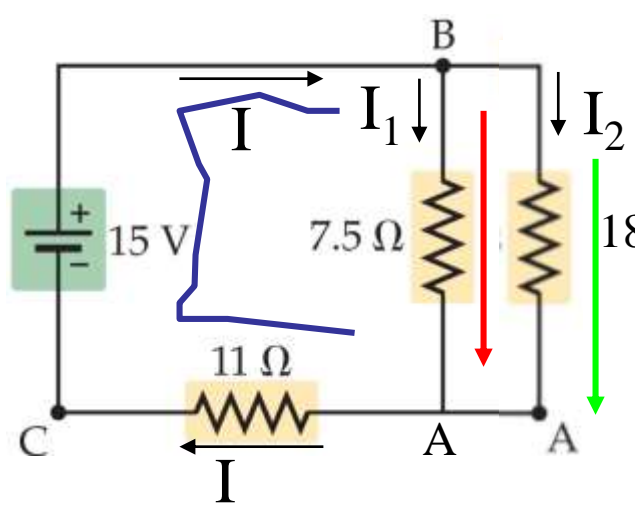
$$\Delta V_{AB} = 18.2 I_2$$

$$\Delta V_{AB} = 7.5 I_1$$

$$\Delta V_{AB} = 15 - (11) I$$

$$I = 0.92 \text{ A}$$

$$\Delta V_{AB} = 15 - (11)0.92 = 4.88 \text{ V}$$



$$I = I_1 + I_2$$

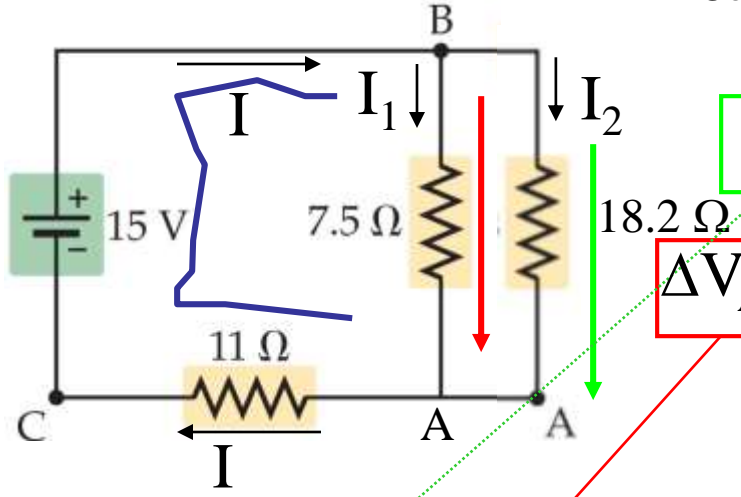
$$\Delta V_{AB} = 18.2 I_2$$

$$\Delta V_{AB} = 7.5 I_1$$

$$4.88 = 18.2 I_2 \rightarrow I_2 = 0.27 \text{ A}$$

$$4.88 = 7.5 I_1 \rightarrow I_1 = 0.65 \text{ A}$$

Another way



$$\Delta V_{AB} = 18.2 I_2$$

$$4.88 = 18.2 I_2 \rightarrow I_2 = 0.27 \text{ A}$$

$$\Delta V_{AB} = 7.5 I_1$$

$$I = I_1 + I_2 = 0.65 + 0.27 = 0.92$$

$$\Delta V_{AB} = 15 - (11) I$$

$$\Delta V_{AB} = 18.2 I_2 = 7.5 I_1$$

$$\Delta V_{AB} = 15 - (11) I = 7.5 I_1$$

$$I_2 = \frac{7.5}{18.2} I_1$$

$$15 - (11) [I_1 + I_2] = 7.5 I_1$$

$$15 - (11) \left[I_1 + \frac{7.5}{18.2} I_1 \right] = 7.5 I_1$$

$$15 = I_1 \left[7.5 + 11 + \frac{11(7.5)}{18.2} \right]$$

$$I_1 = 0.65 \text{ A}$$

$$\Delta V_{AB} = 7.5 (0.65) = 4.88$$