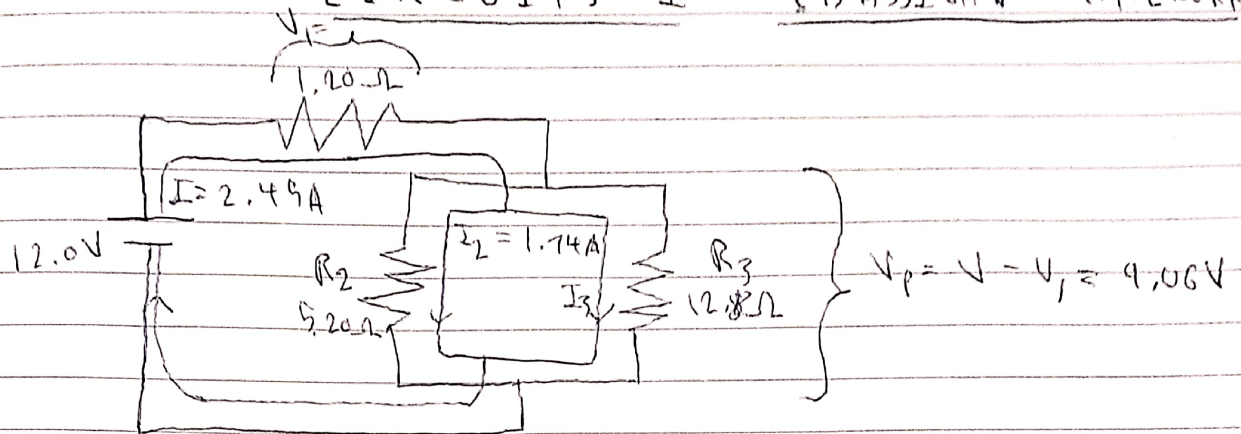


CIRCUITS I WEB ASSIGNMENT HOMEWORK

1. Ans:-



As we can see in the diagram above, the current I flows through the series circuit and the current I divides in parallel circuit, where resistors R_2 and R_3 are connected in parallel circuit in their respective resistances ratio.

$$\text{i.e. } I = I_2 + I_3$$

(a) Given :- $I = 2.49 \text{ A}$ & $I_2 = 1.74 \text{ A}$

Then, using the formula $I = I_2 + I_3$, we get:-

$$I_3 = I - I_2$$

$$= 2.49 \text{ A} - 1.74 \text{ A}$$

$$\therefore I_3 = 0.71 \text{ A}$$

(b) Ohm's law implies that, $V \propto I$, which is :-
 $V = IR$

Given :- $V_p = 9.06 \text{ V}$ & $R_3 = 12.8 \Omega$, then :-

Using Ohm's law :- $V_p = I_3 R_3$

$$\therefore I_3 = \frac{V_p}{R_3} = \frac{9.06 \text{ V}}{12.8 \Omega} = 0.7078 \text{ A}$$

$$\therefore I_3 = 0.7078 \text{ A}$$