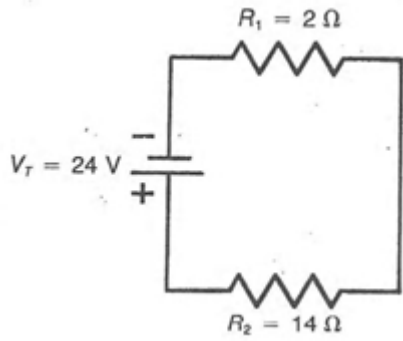


## Series & Parallel Circuit Calculation

1.



Fill in the known and unknown values in the following chart: [3 marks]

	Voltage	Current	Resistance
<b>R<sub>1</sub></b>			
<b>R<sub>2</sub></b>			
<b>Total</b>			

Show all your steps [ 3marks]

- a. What is the total resistance of the circuit? ( $R_T = R_1 + R_2$ )

$R_T =$  \_\_\_\_\_

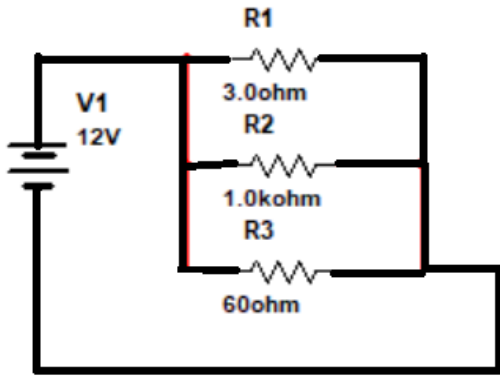
- b. What is the current across R<sub>1</sub>, R<sub>2</sub>? ( $I_T = V_T / R_T$ ,  $I_T = I_1 = I_2$  in series circuit)

$I_1 =$  \_\_\_\_\_     $I_2 =$  \_\_\_\_\_

- c. What is Voltage dropped across R<sub>1</sub>, R<sub>2</sub>? ( $V_1 = I_1 * R_1$ ,  $V_2 = I_2 * R_2$ )

$V_1 =$  \_\_\_\_\_     $V_2 =$  \_\_\_\_\_

2.



Fill in the known and unknown values in the following chart: [4 marks]

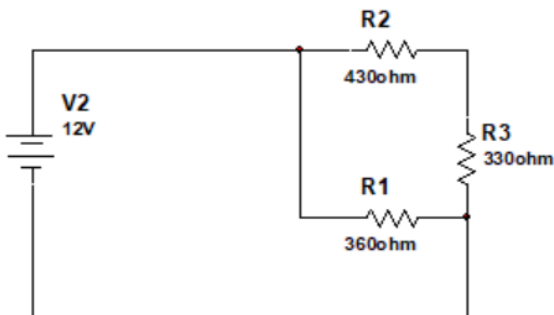
	Voltage	Current	Resistance
<b>R<sub>1</sub></b>			
<b>R<sub>2</sub></b>			
<b>R<sub>3</sub></b>			
<b>Total</b>			

Show all your [4 marks]

Hint

- Find Total Resistance in the circuit.
- Find Current across each component in the circuit.
- Find Voltage dropped across each resistor in the circuit.

3.



Fill in the known and unknown values in the following chart: [4 marks]

	Voltage	Current	Resistance
<b>R<sub>1</sub></b>			
<b>R<sub>2</sub></b>			
<b>R<sub>3</sub></b>			
<b>Total</b>			

Show your steps [4 marks]

Hint:

- Do all current across each component have the same value in series circuit?  
 $I_2 = I_1 = I_T$
- Find the Voltage dropped across each resistor  
 $V_1 = R_1 * I_1$   
 $V_2 = V_T - V_1$  since  $V_T = V_1 + V_2$  (in a series circuit)
- Find resistance of R<sub>2</sub> ( $R_2 = V_2 / I_2$ )