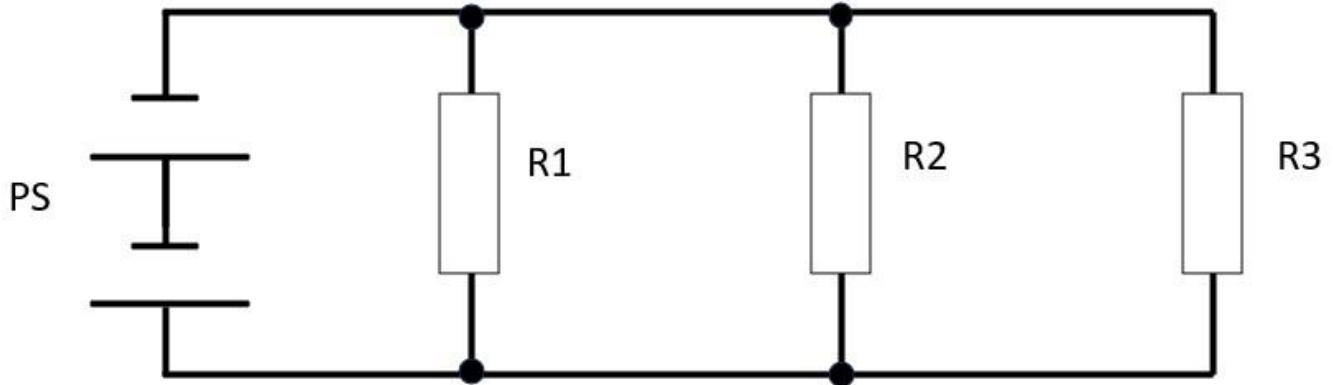


Lesson 4 - QUESTIONS

Q1. Refer to Figure 1 and calculate the currents and populate Table 1 with the results.

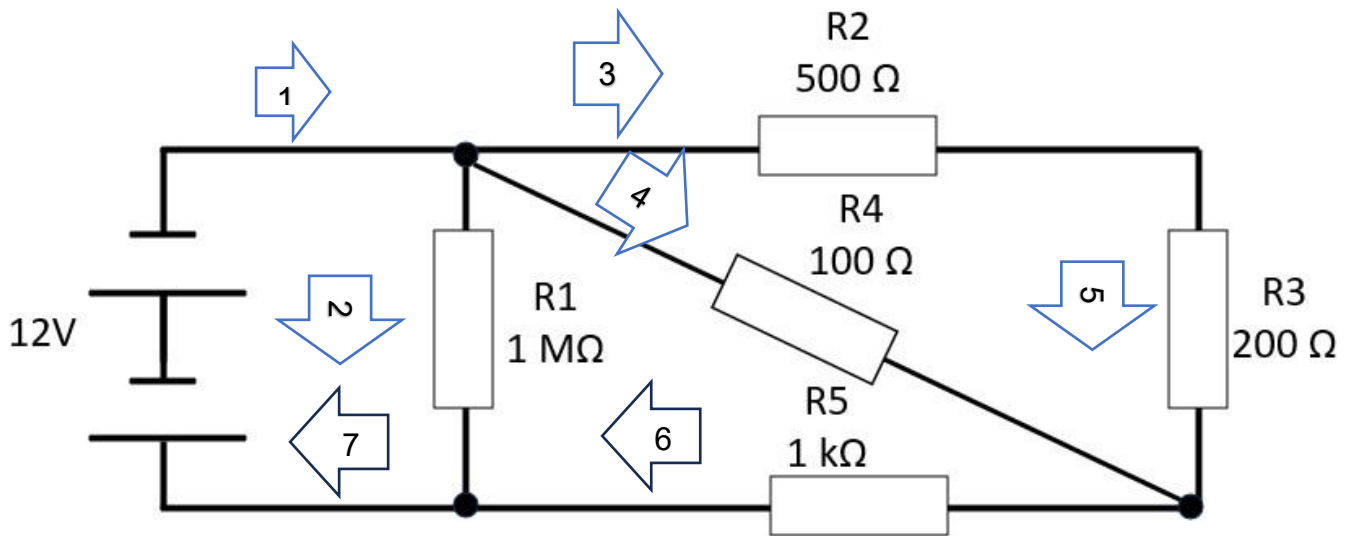


Question	PS	R1	R2	R3
1	10 V	100 Ω	100 Ω	100 Ω
2	15 V	10 M Ω	5 M Ω	1 M Ω
3	100 V	1 K Ω	20 Ω	1 k Ω

$I_{Total In}$	I_{R1}	I_{R2}	I_{R3}	$I_{Total Out}$

Q2

Prove Kirchhoff's current law.

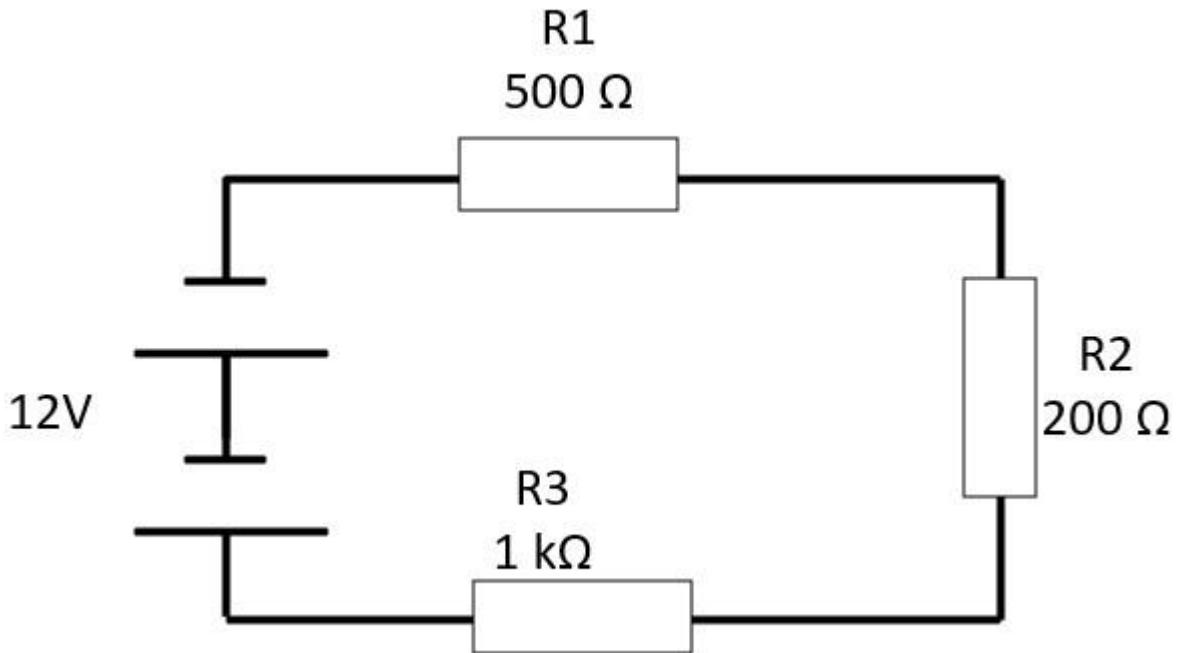


Hint: Redraw the equivalent circuit. First work on the resistors away from the power supply.

1	2	3	4	5	6	7
11 mA	12 μ A					11 mA

3 and 4 current = 11 mA – 12 μ A

Q3



V in	V R1	V R2	V R3	V Total

Q4 Now

PS = 100 V

R1 = 100 Ω

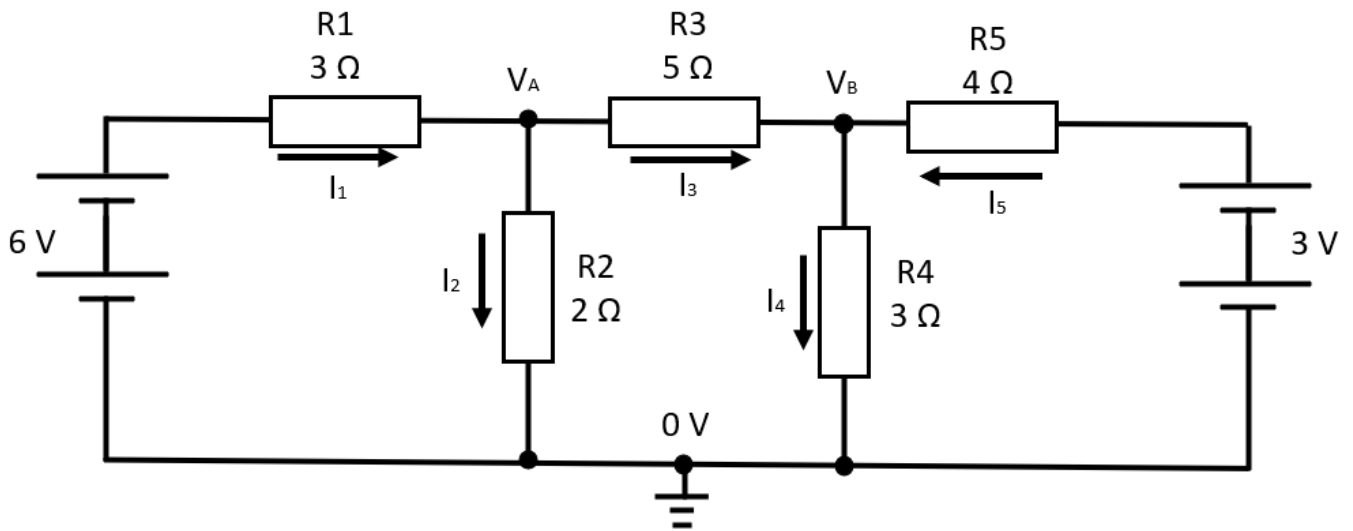
R2 = 1 kΩ

R3 = 500 Ω

V in	V R1	V R2	V R3	V Total

Q5 Solve for the following.

VA	VB	I1	I2	I3	I4	I5



Q6

Calculate R_{Total} and I_{Total}

All resistors are $1k\Omega$

