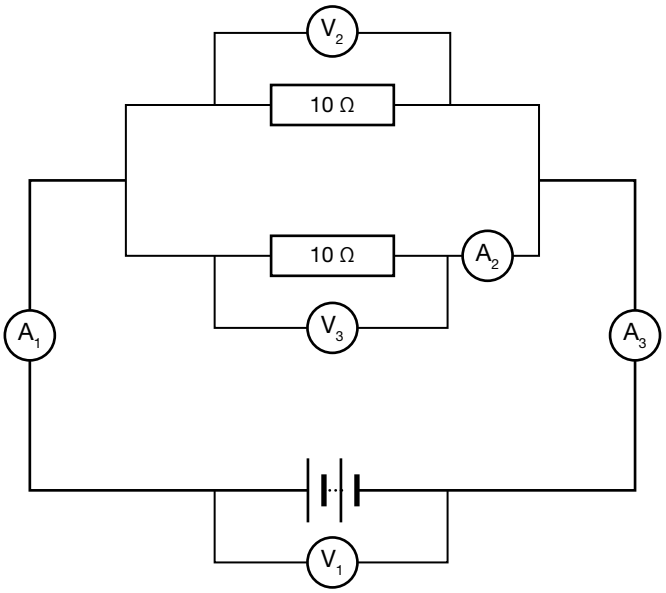
Current, resistance and potential difference and resistors

In the following circuit V_1 = 5 V and A_1 = 1 A. Complete the missing values. (2 marks, ★★★)



A_2 = ... A_3 = ... V_2 = ... V_3 = ...

NAILIT!

Knowing the *I–V* characteristics for the following components is essential: wire, resistor, filament lamp and diode.

Make sure that you know how to get the data from an experiment and then how you would plot a graph of *I–V* to observe whether the component always follows Ohm's law.

Which of those four components are ohmic and which are non-ohmic?

DOIT!

Practise sketching the *I–V* graph for a component that follows Ohm's law. Annotate how you would work out the resistance of the component if the graph is a straight line.

Remember that if you put potential difference on the *x*-axis and current on the *y*-axis, then the gradient will not be the resistance.

It will be the reciprocal of the resistance or $\frac{1}{\text{resistance}}$.