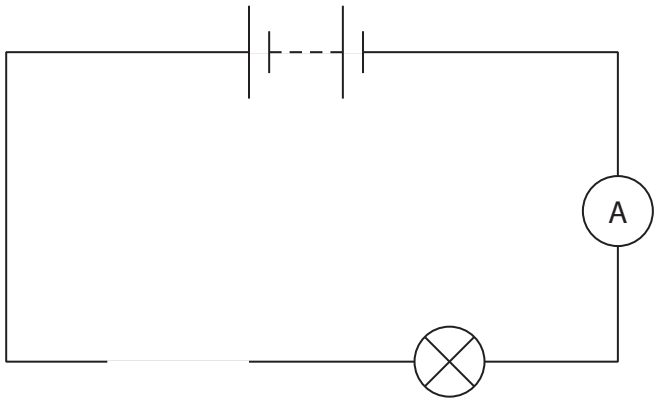
8 The diagram shows an incomplete series circuit.



(a) (i) Draw a thermistor to complete the circuit.

(1)

(ii) Add a voltmeter to the circuit to measure the voltage across the lamp.

(2)

(b) The voltmeter measures a voltage of 5.6 V.

The ammeter measures a current of 790 mA.

(i) State the equation linking voltage, current and resistance.

(1)

(ii) Calculate the resistance of the lamp.

(3)

resistance = ... Ω

(c) The completed circuit is moved from a cold room to a hot room.

Explain how this would affect the brightness of the lamp.

(3)

(d) State how the current in the circuit would change if another lamp is added in series with the first lamp.

(1)

(Total for Question 8 = 11 marks)