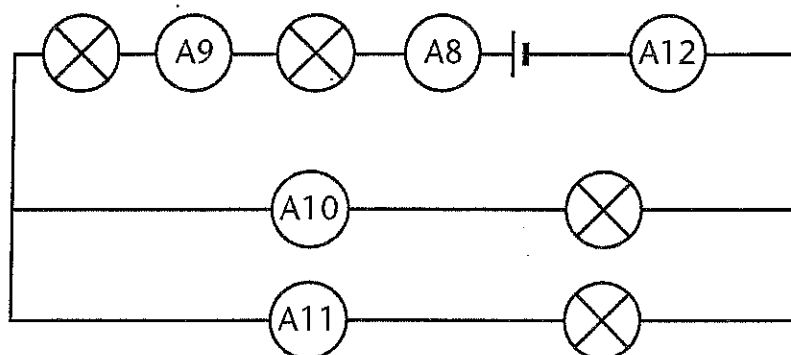
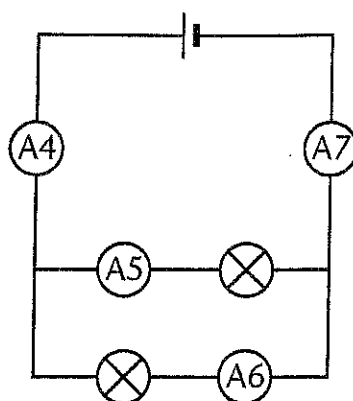
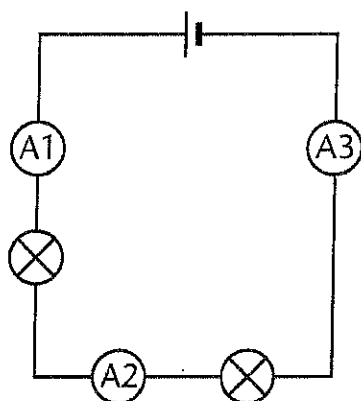


- 4 Some circuit diagrams are shown below. Think about them carefully, then copy and complete the table to show the current measured by each ammeter.



Ammeter	Current in amps
A1	1.5
A2	1
A3	0.5
A4	0.6
A5	0.2
A6	1.5
A7	1.5
A8	3.0
A9	4.0
A10	1.0
A11	5.0
A12	5.0

EXTENSION

- 5 Tong's dad owns a Chinese restaurant. It has a large model dragon in the centre of the room that is lit up by a bulb inside it. Tong's dad likes to turn the lights down gradually during the evening to add a bit of atmosphere.

- a What could he add into the dragon lighting circuit to do this?
Explain how this would make the bulb gradually dimmer.

variable resistor
or a slave

One busy evening the bulb failed, so Tong's dad replaced it with a new one. The new bulb was very dim and the dragon looked rather pathetic, instead of rather spectacular.

- b Suggest what mistake Tong's dad might have made when he replaced the bulb, and explain why this made the new bulb shine less brightly. Use the words 'resistance' and 'current' in your answer.

the new bulb higher
resistance than for it
takes more power