Physics - Key Stage 3

Lesson 3 - Electricity and Magnetism

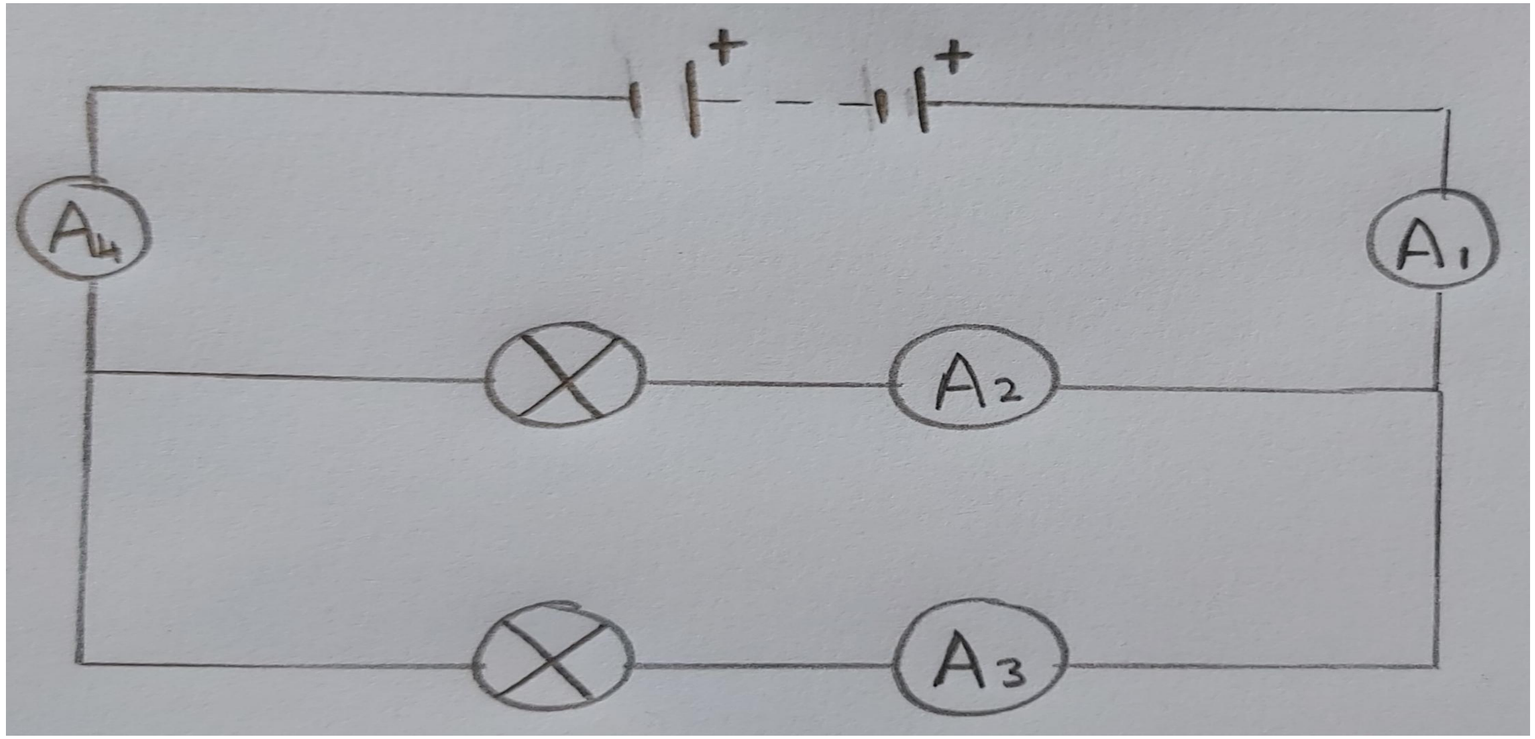
Current & Parallel Circuits - Download

Miss White

Slides from video

Investigating current in parallel circuits

An ammeter was placed in 4 positions



Source: Miss White

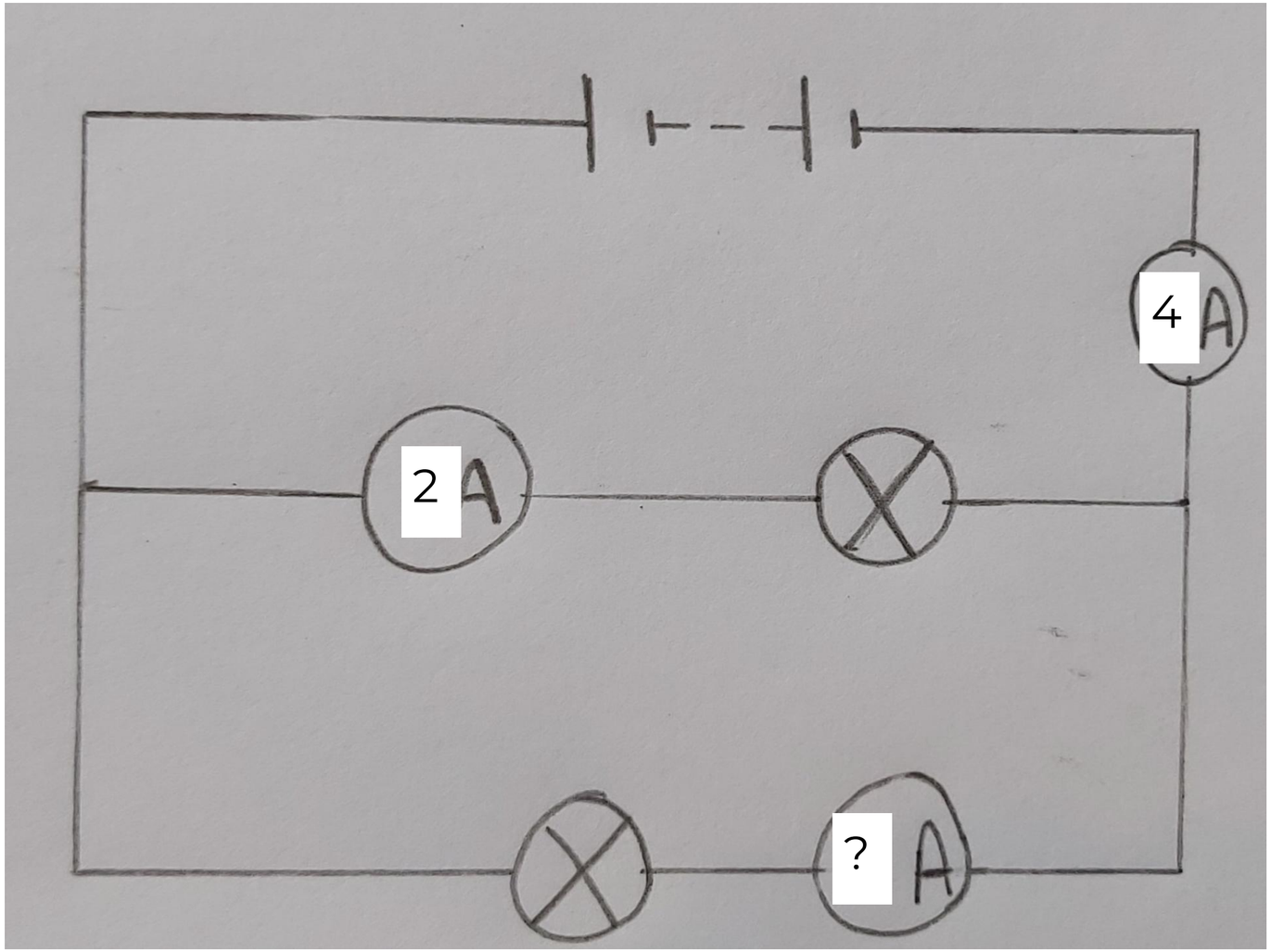
Investigating current in parallel circuits

Describe the results

Position	Current (A)
A1	6.00
A2	3.00
A3	3.00
A4	6.00

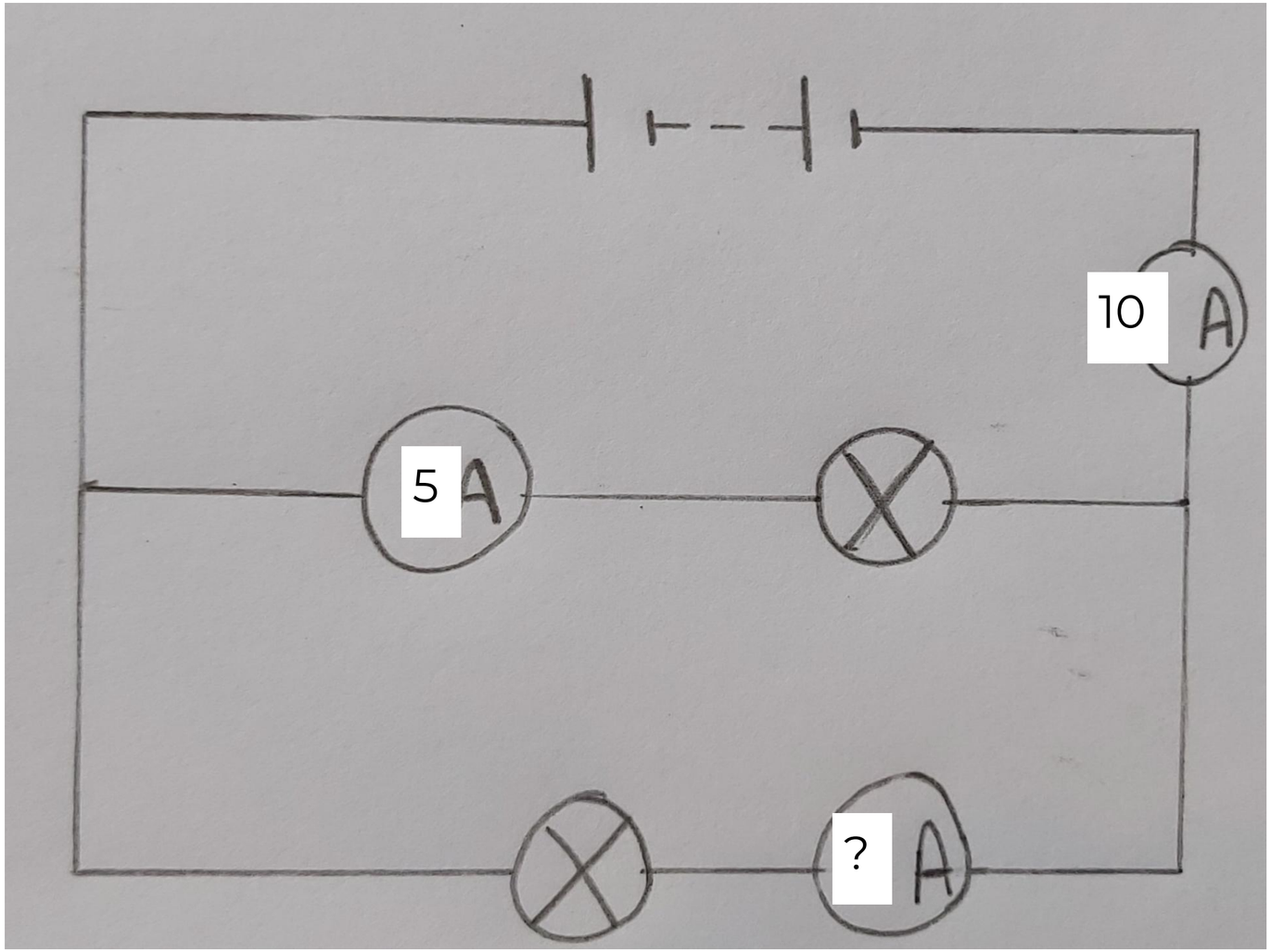
Explain what this tells your about current in parallel circuits

Fill in the missing value 1



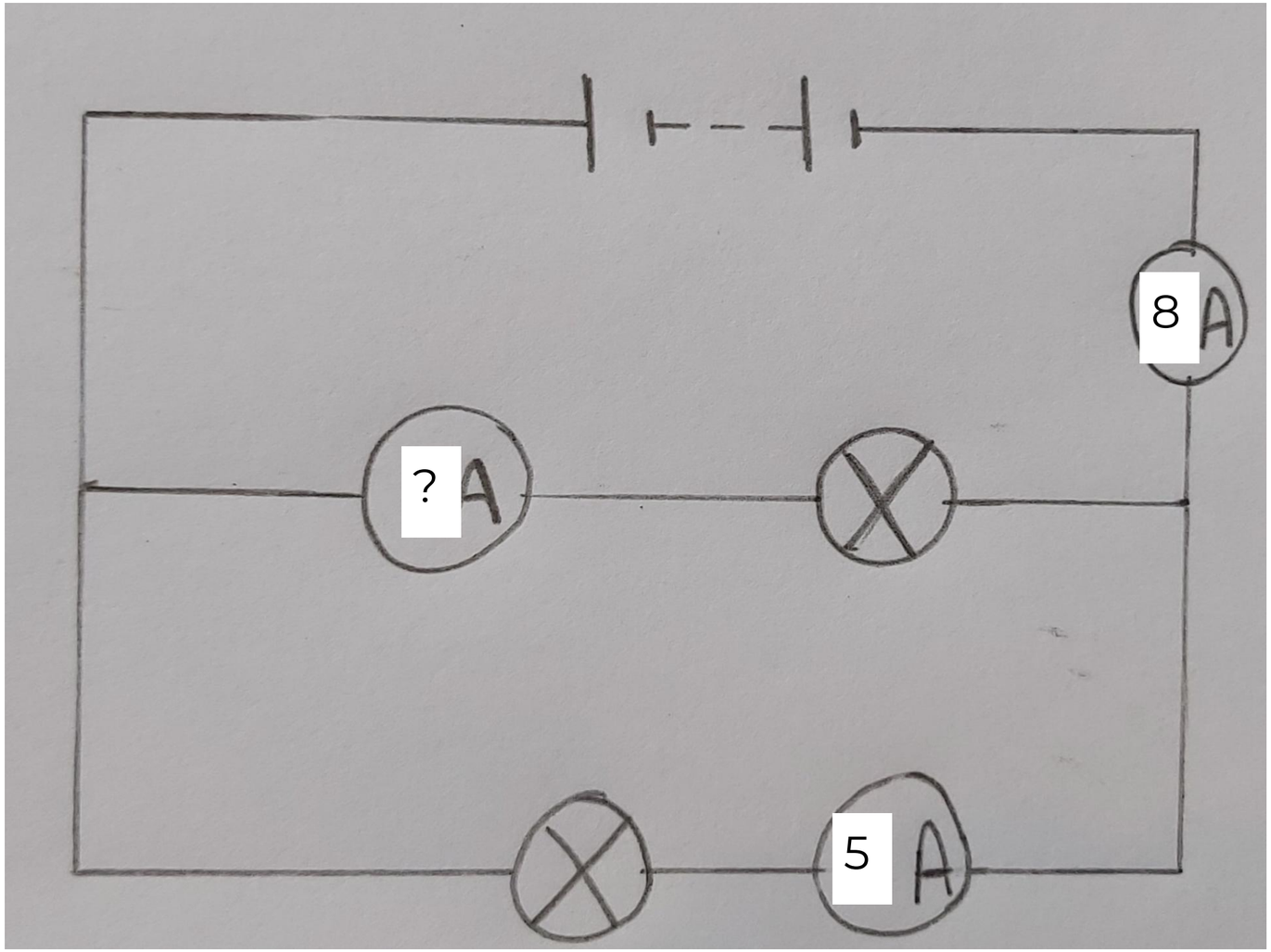
Source: Miss White

Fill in the missing value 2



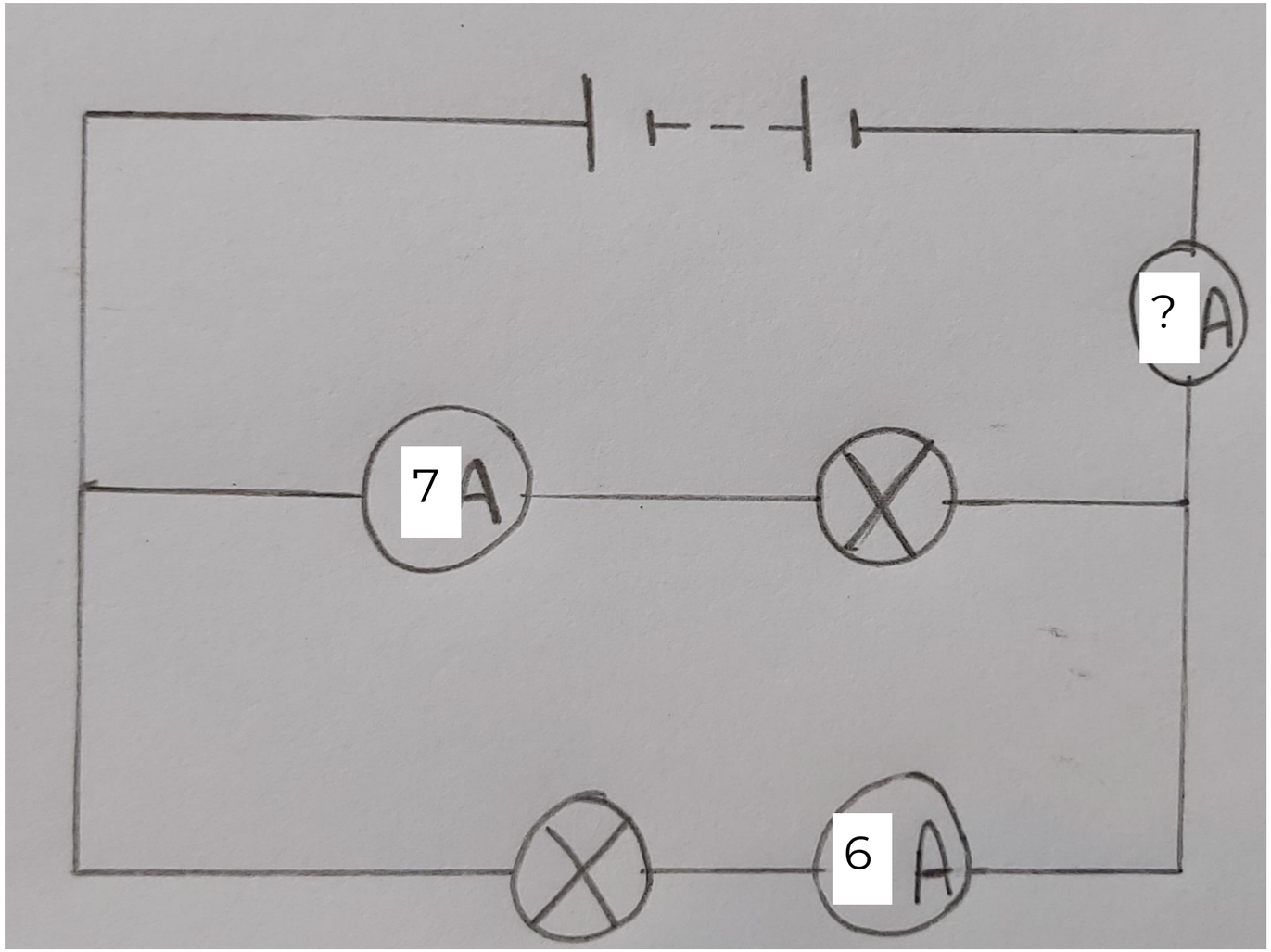
Source: Miss White

Fill in the missing value 3



Source: Miss White

Fill in the missing value 4

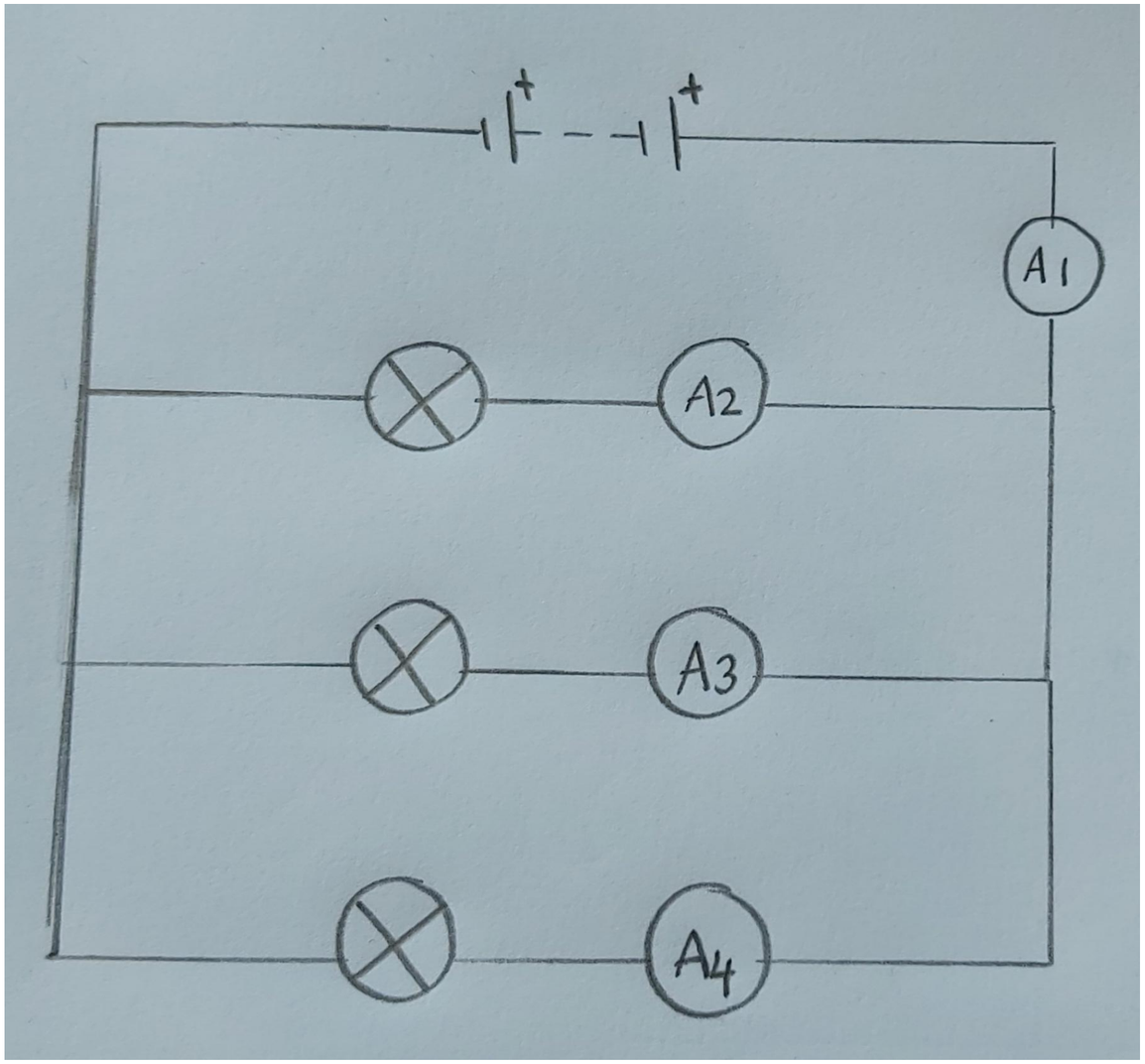


Source: Miss White

More branches 1

Fill in the blank

Position	Current (A)
A1	15.00
A2	7.00
A3	4.00
A4	

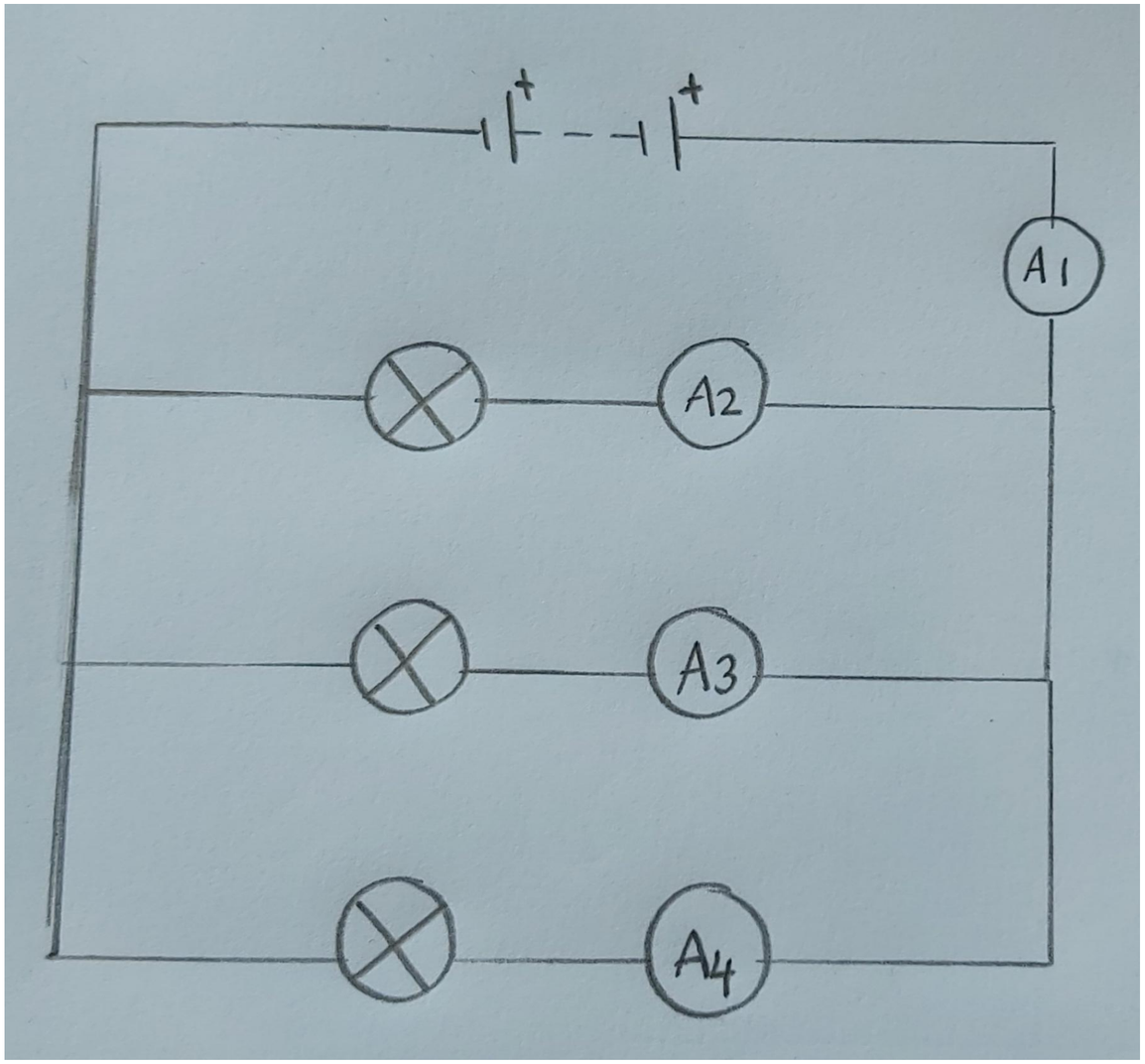


Source: Miss White

More branches 2

Fill in the blank

Position	Current (A)
A1	10.00
A2	2.00
A3	
A4	5.00

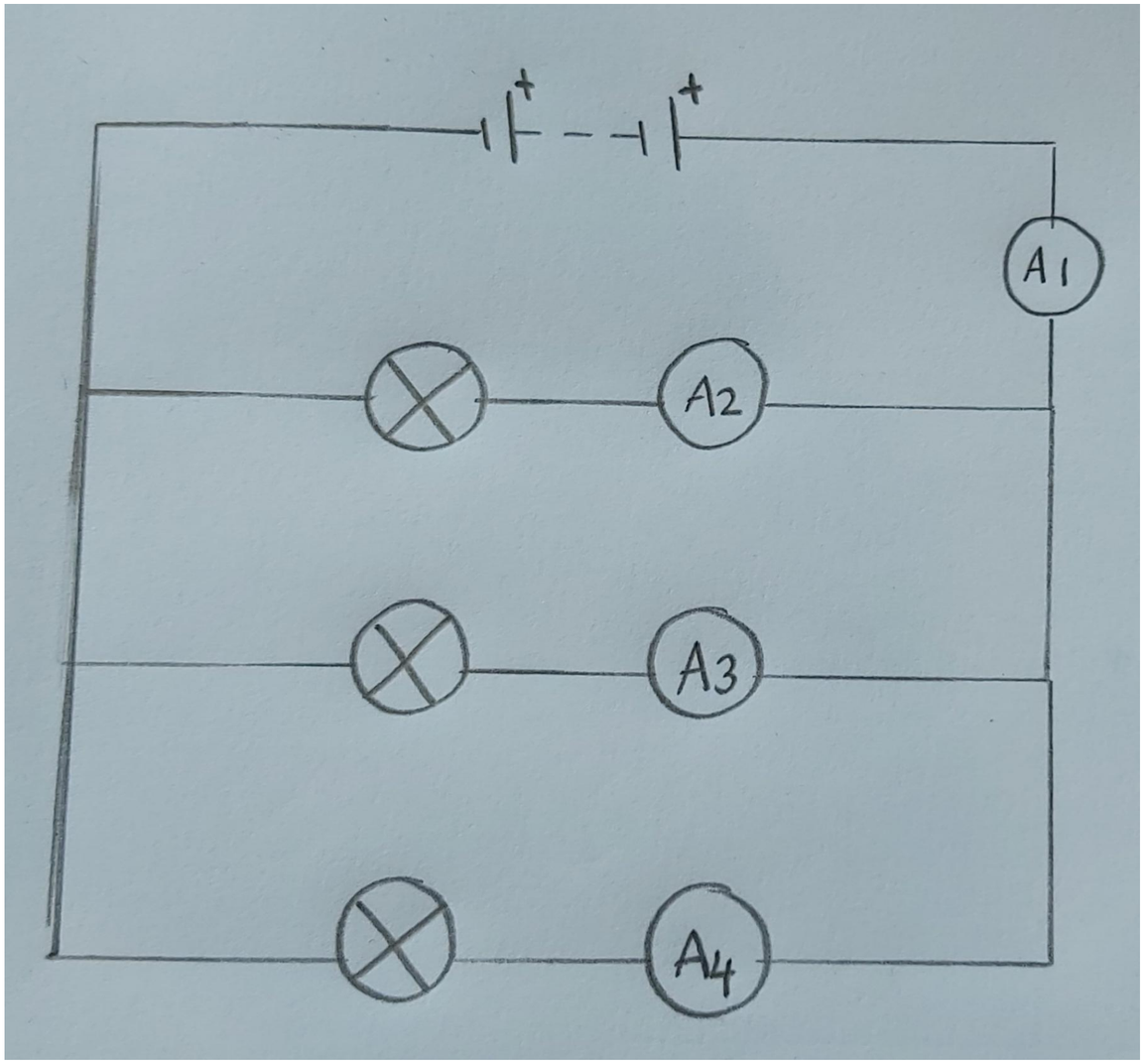


Source: Miss White

More branches 3

Fill in the blank

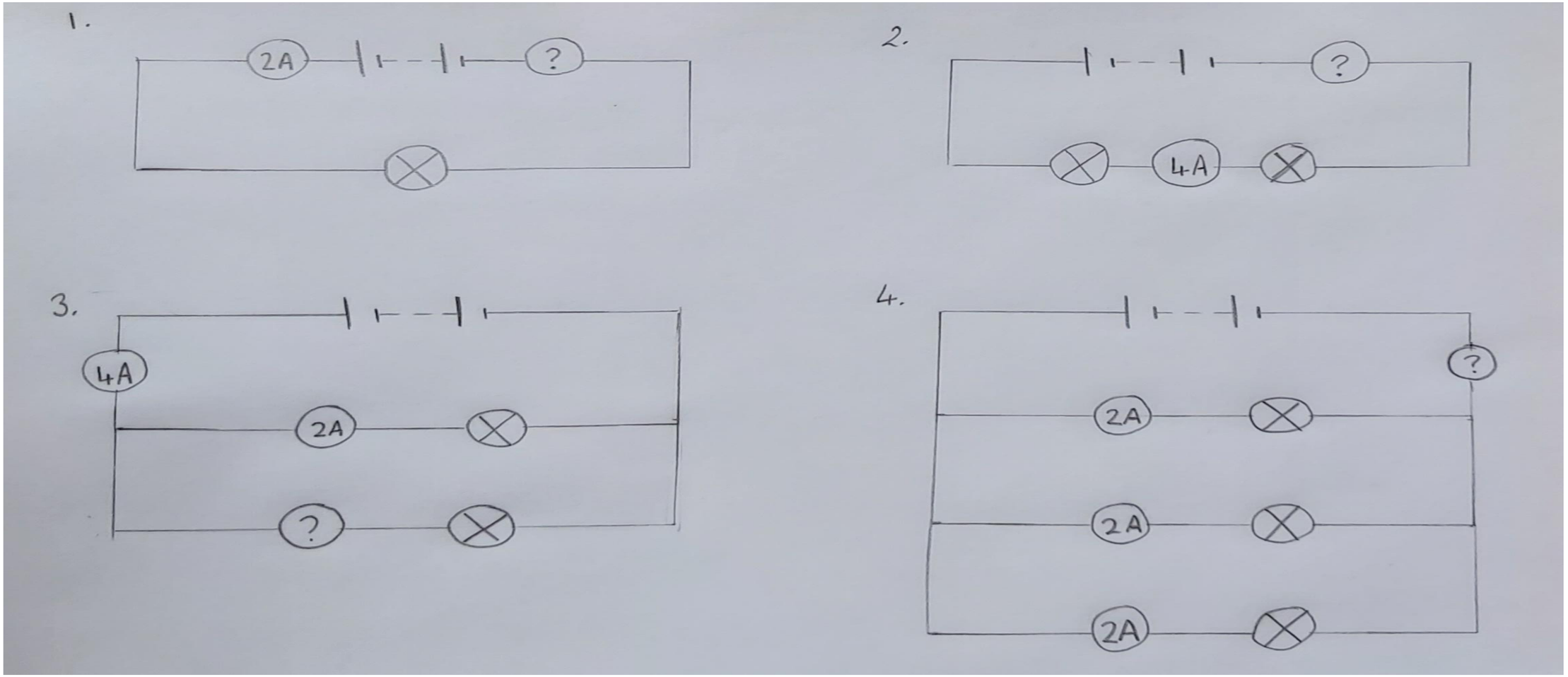
Position	Current (A)
A1	
A2	4.00
A3	4.00
A4	6.00



Source: Miss White

Independent Task

Find the missing value and explain your answer



Source: Miss White

Answers

Investigating current in parallel circuits - Answer

The current is the same at A1 and A4 and the same at A2 and A3.

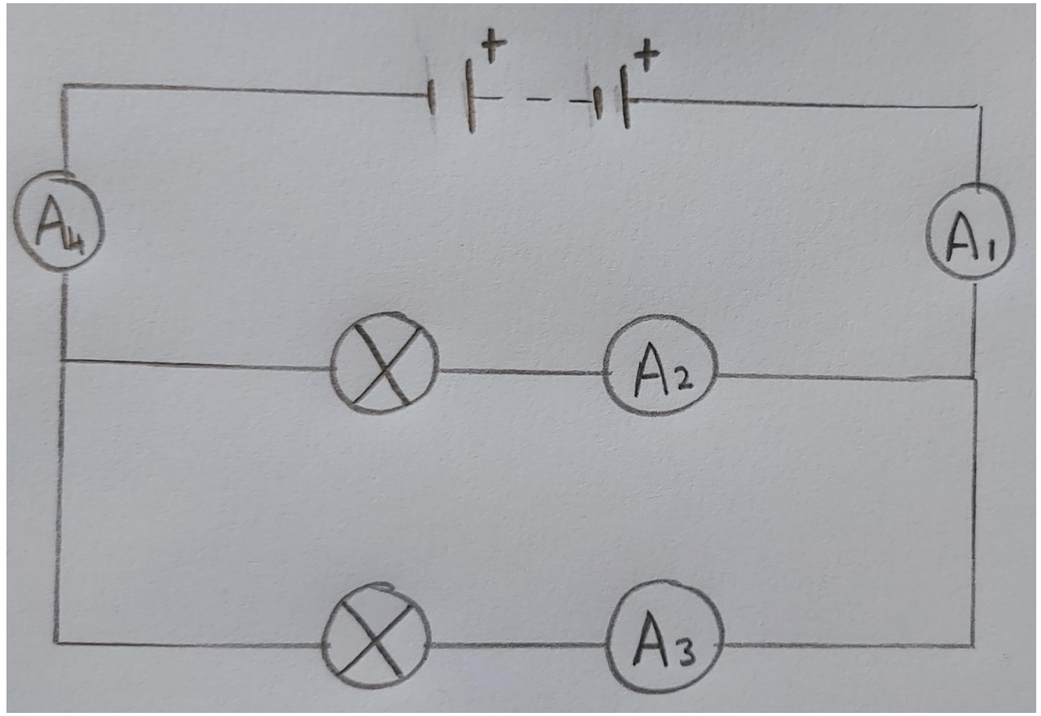
A2 + A3 = A1 or A4

Position	Current (A)
A1	6.00
A2	3.00
A3	3.00
A4	6.00

Investigating current in parallel circuits

In parallel circuits, the current entering the branches is equal to the current leaving the branches

Position	Current (A)
A1	6.00
A2	3.00
A3	3.00
A4	6.00



Source: Miss White

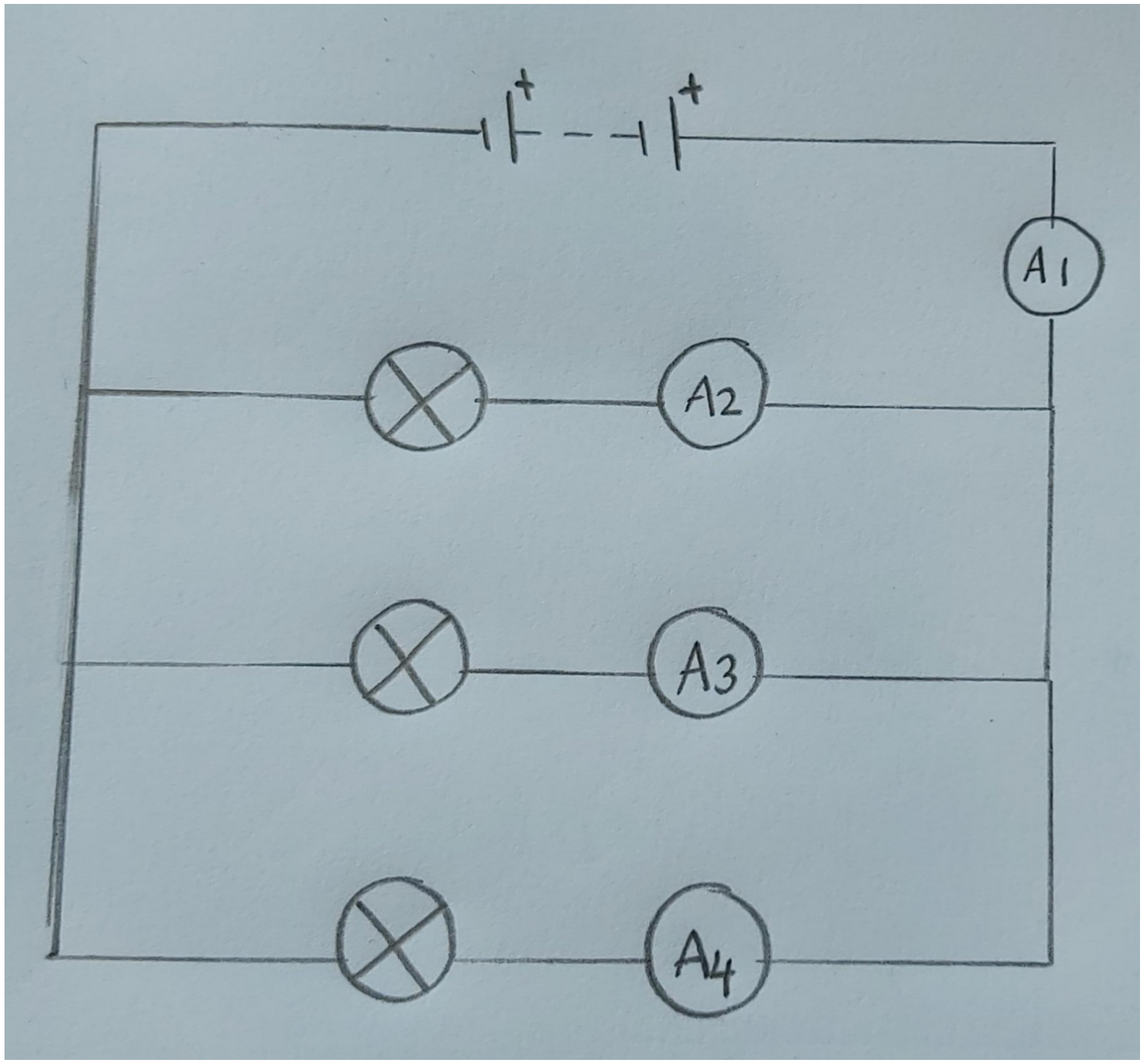
Fill in the missing value - answers

1. (4 - 2 =) 2A
2. (10 - 5 =) 5A
3. (8 - 5 =) 3A
4. (7 + 6 =) 13A

More branches 1 - answers

Fill in the blank

Position	Current (A)
A1	15.00
A2	7.00
A3	4.00
A4	**4.00**

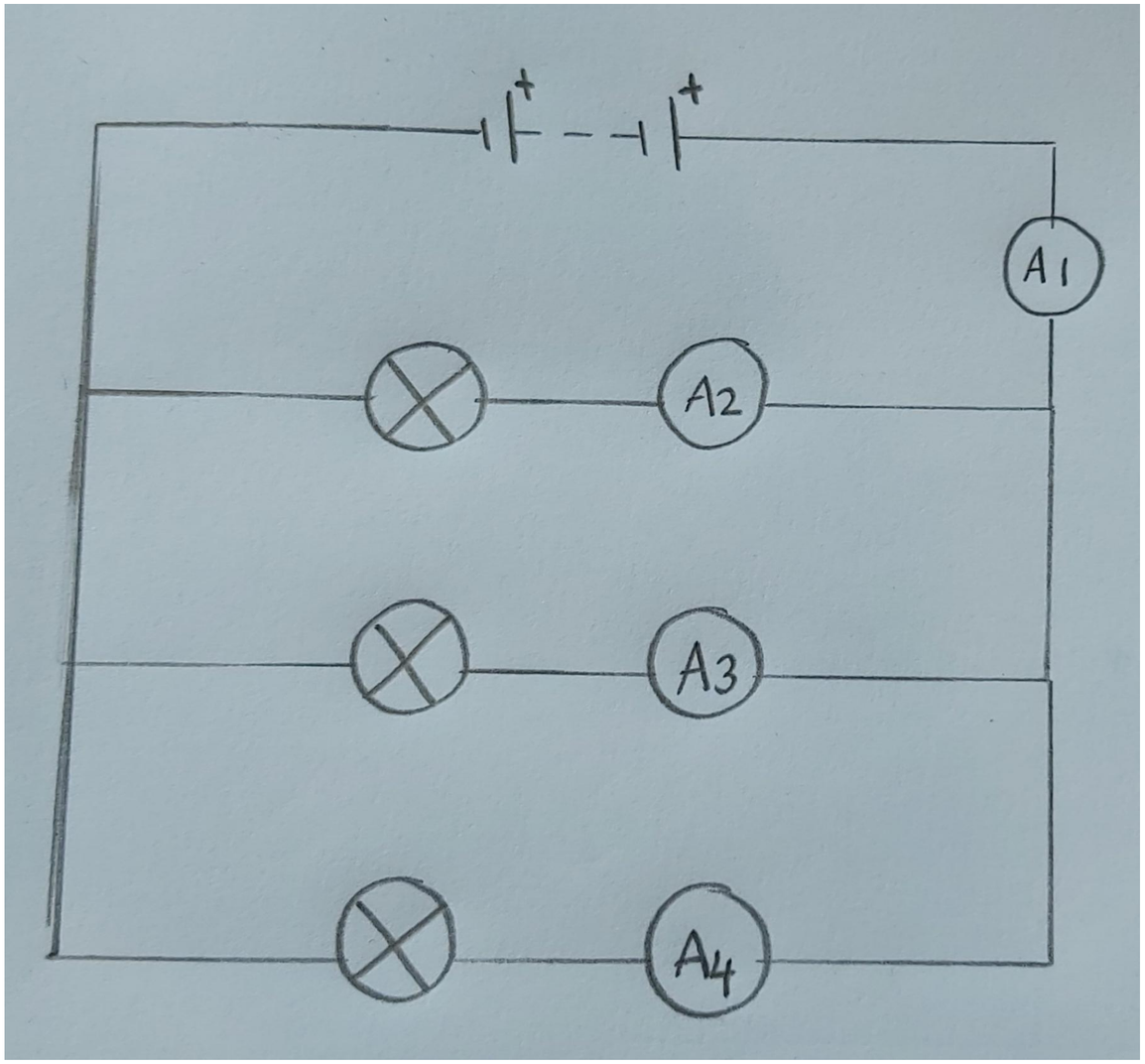


Source: Miss White

More branches 2 - answers

Fill in the blank

Position	Current (A)
A1	10.00
A2	2.00
A3	**3.00**
A4	5.00

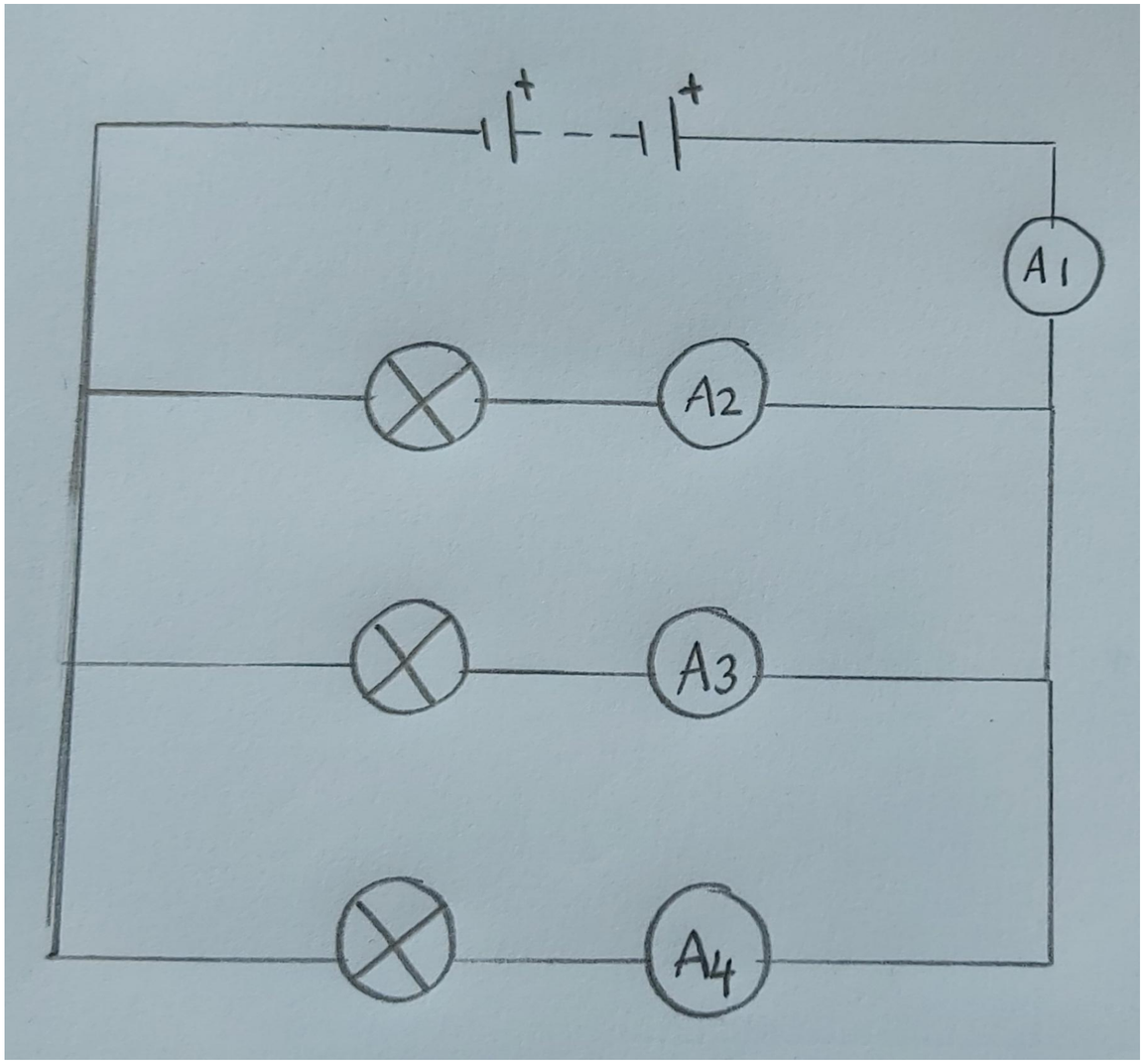


Source: Miss White

More branches 3 -answers

Fill in the blank

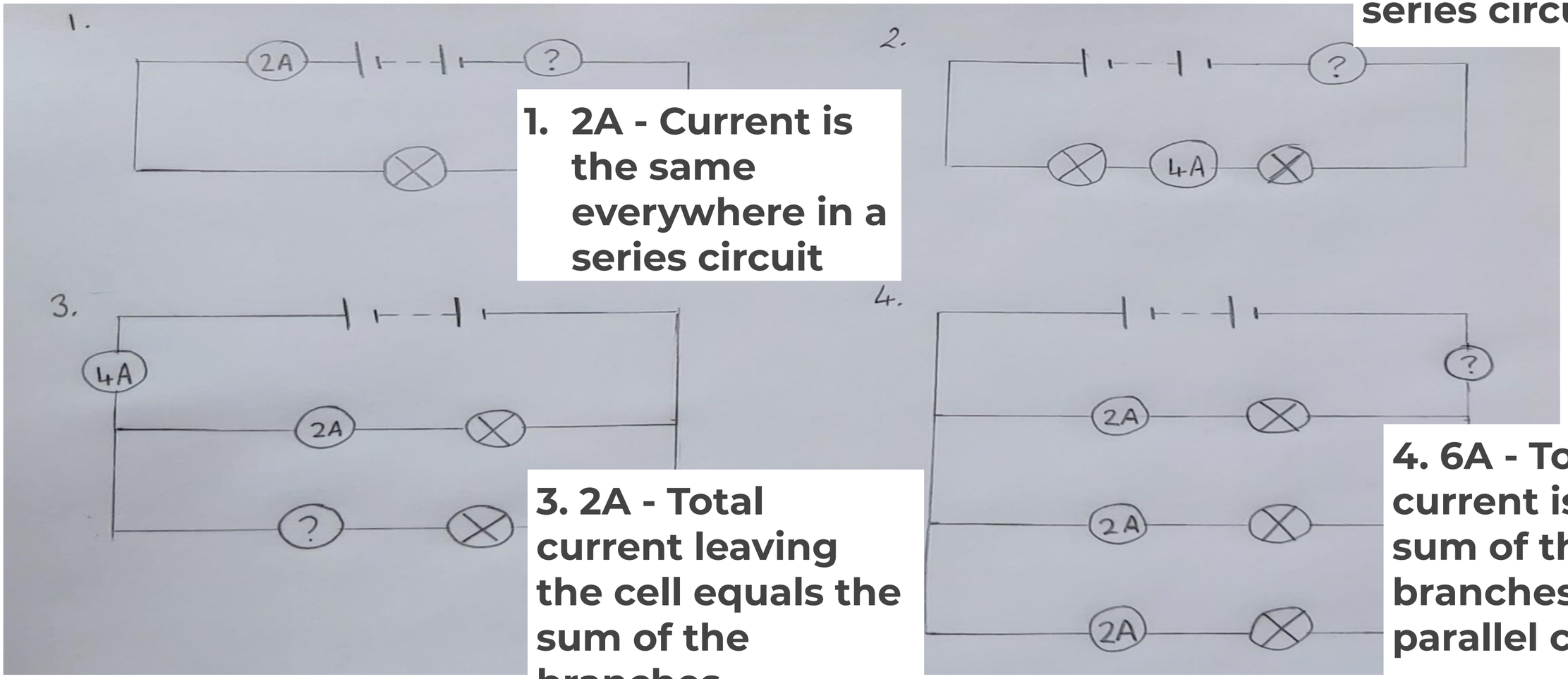
Position	Current (A)
A1	**14.00**
A2	4.00
A3	4.00
A4	6.00



Source: Miss White

Independent task - answers

Source: Miss White



1. **2A - Current is the same everywhere in a series circuit**

2. 4A - Current is the same everywhere in a series circuit

3. 2A - Total current leaving the cell equals the sum of the branches

4. 6A - Total current is the sum of the branches in a parallel circuit