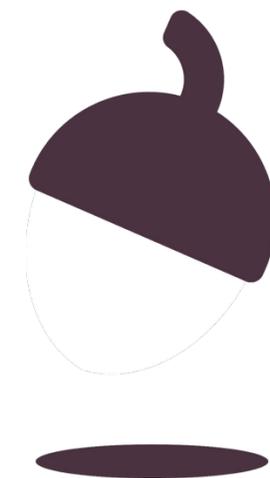


Physics - Key Stage 3

Lesson 5- Electricity and Magnetism

Potential Difference in Parallel Circuits - Worksheet

Miss White



OAK
NATIONAL
ACADEMY

Questions from video

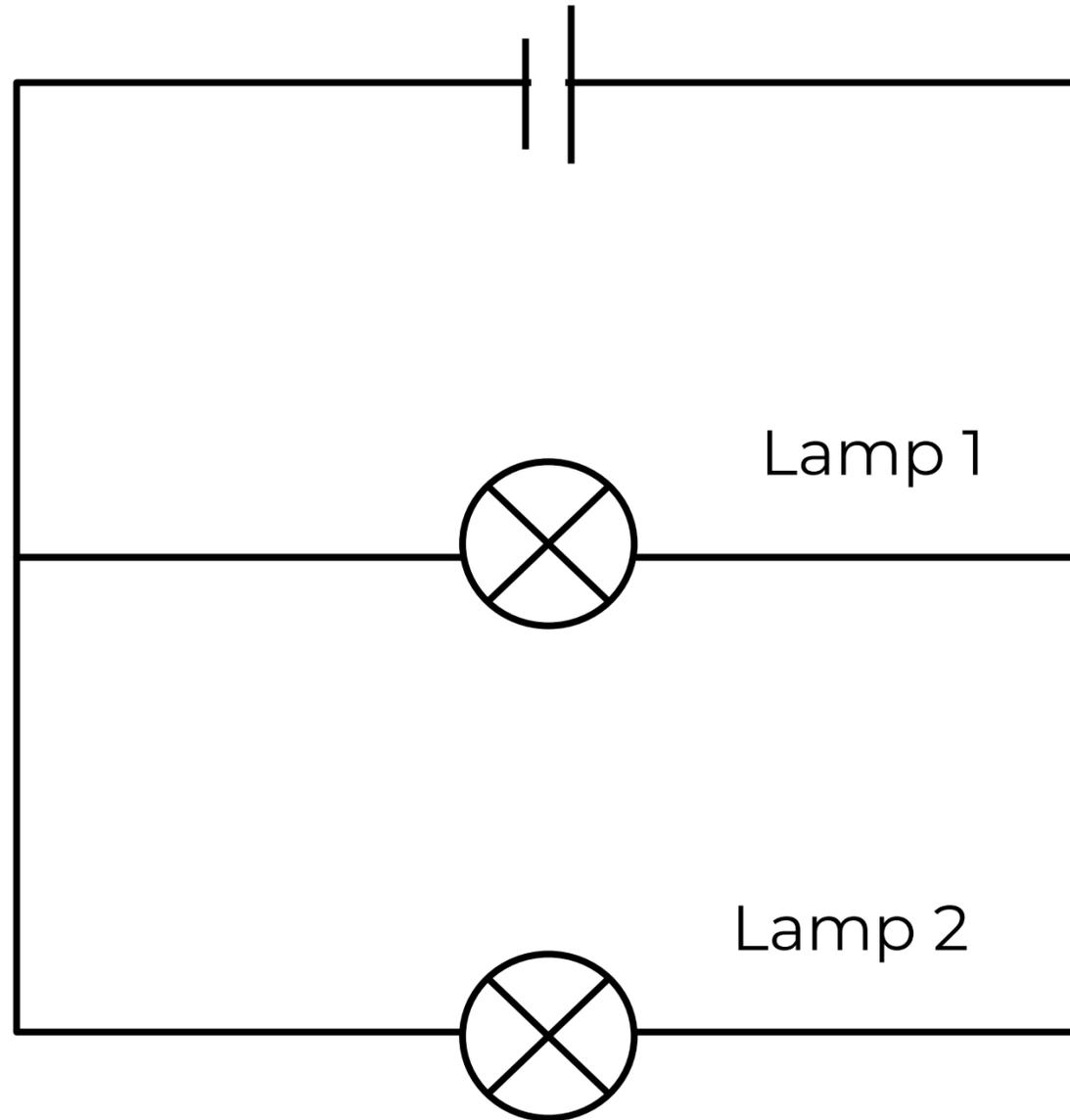


There are two types of circuit...

1. Name the two types of circuit.
2. Describe the differences between them.
3. Draw an example of each with one cell and three filament lamps.



Investigating potential difference in parallel circuits



Source: Miss White

Draw the voltmeter to measure p.d. across:

- Lamp 1
- Lamp 2
- The cell



Results

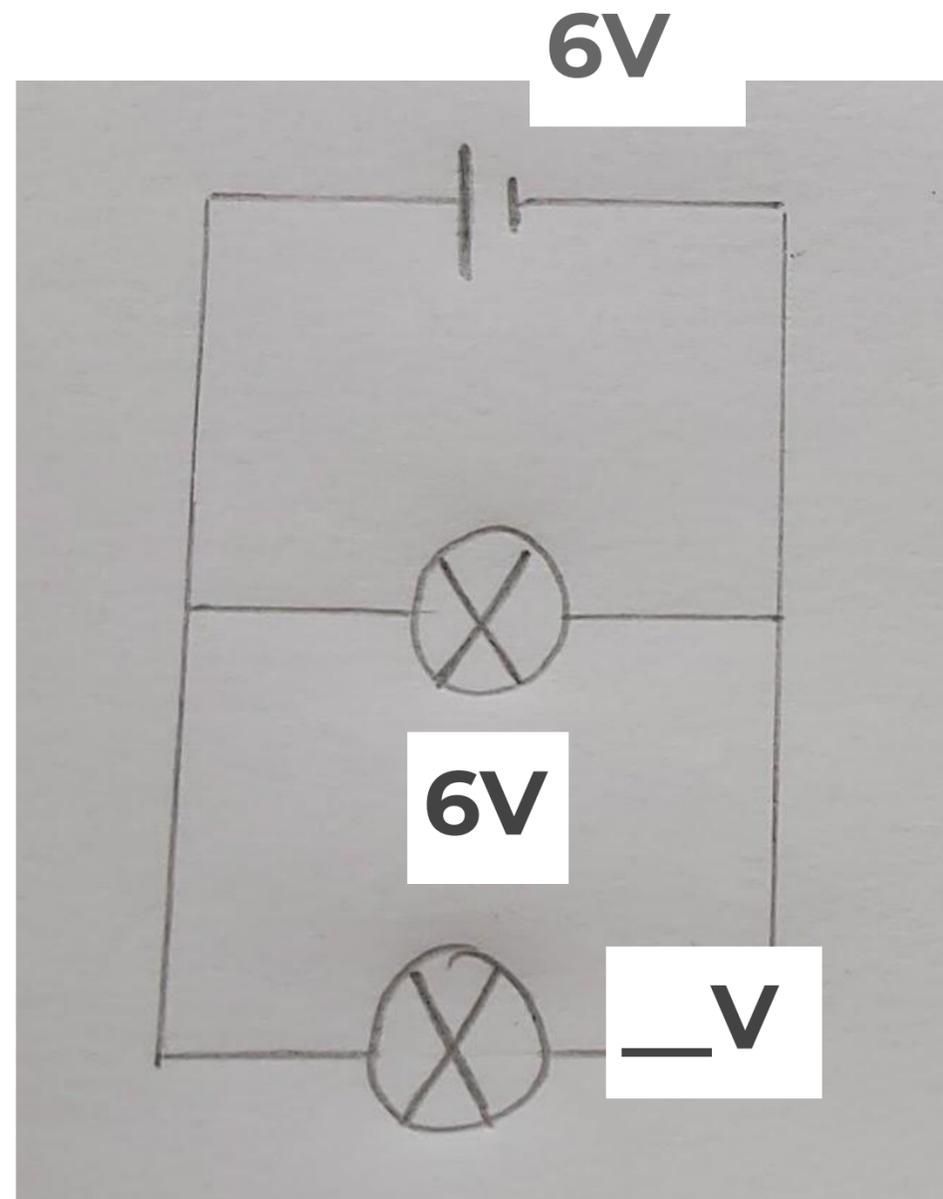
Here are the student's results

1. Explain how the p.d.'s are related to one another
2. Explain what this tells you about p.d. in parallel circuits

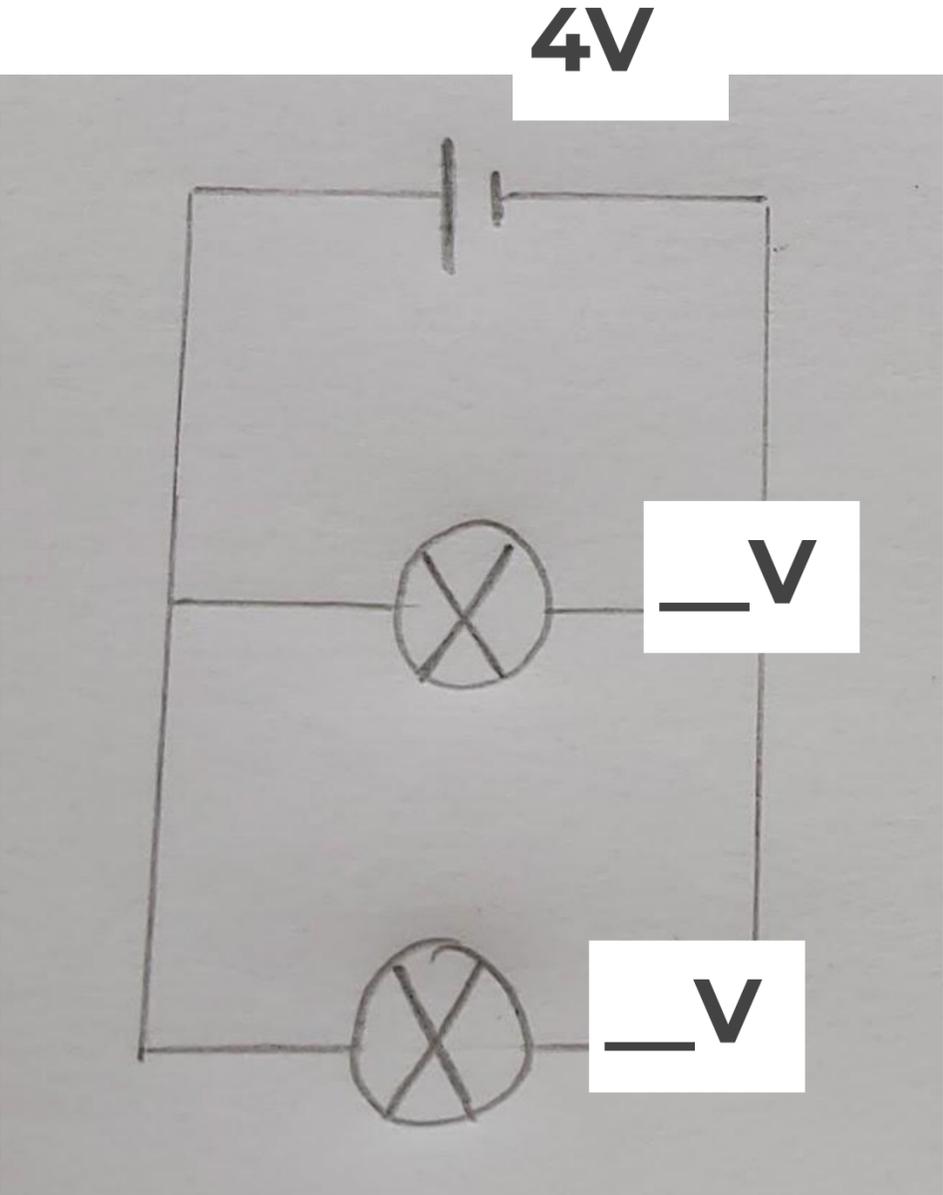
Position	Potential difference (V)
V1	6.00
V2	6.00
V3	6.00



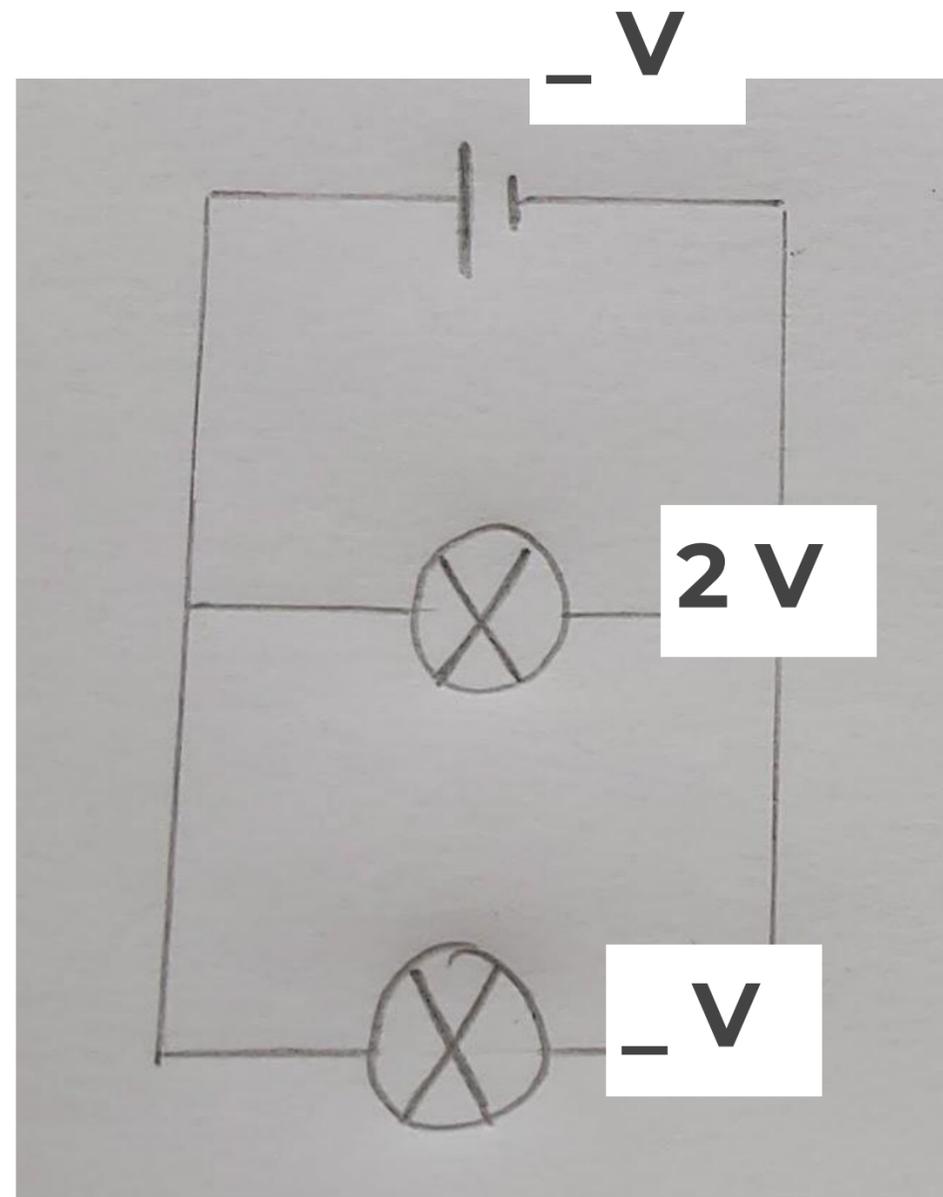
Calculate 1



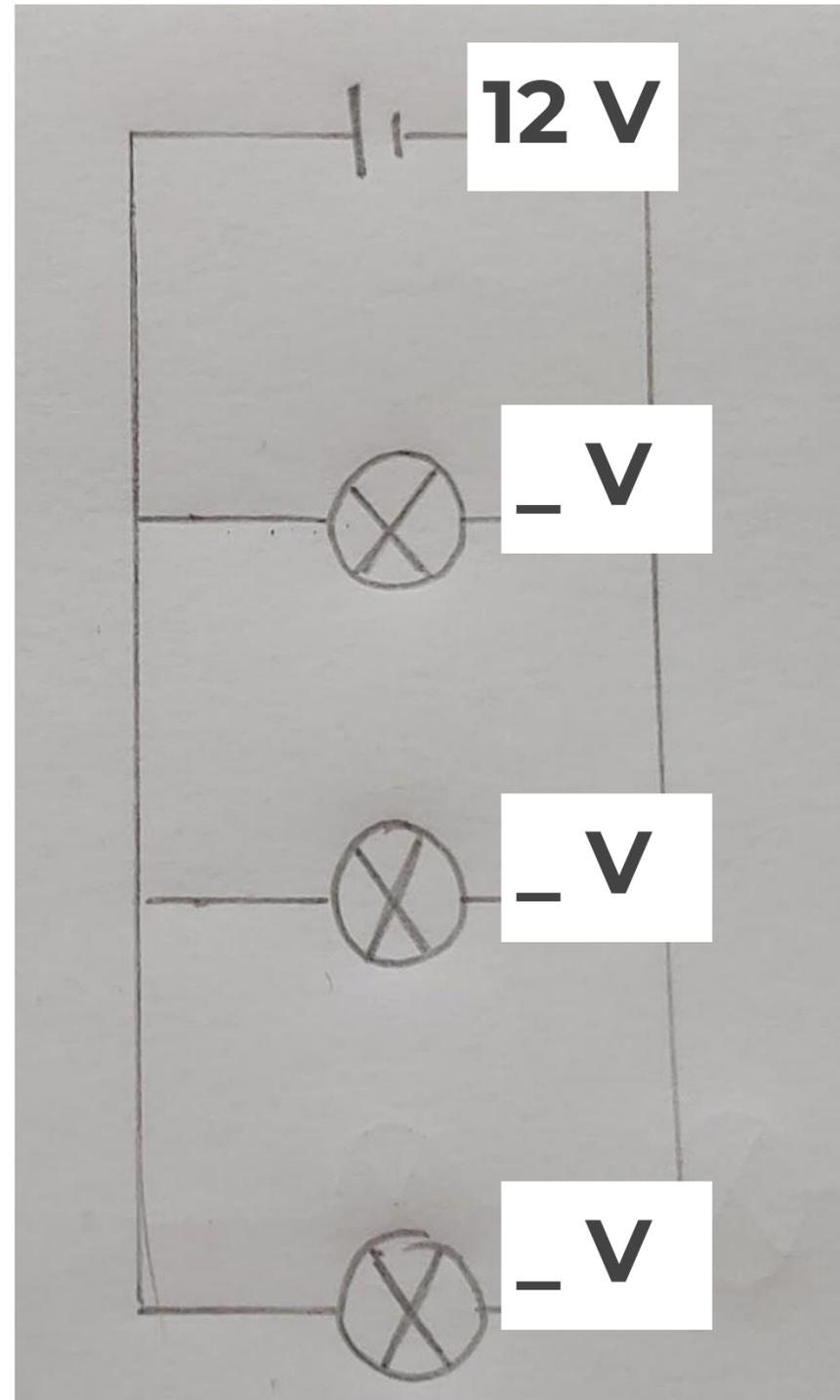
Calculate 2



Calculate 3



Calculate 4



Match- Up Task

Series

Parallel

Current is the same through all components

Total current from the cell equals sum of currents through the branches

Potential difference is the same across each branch

Potential difference across the cell is the sum of the potential difference across the components



Answers



There are two types of circuit - answers

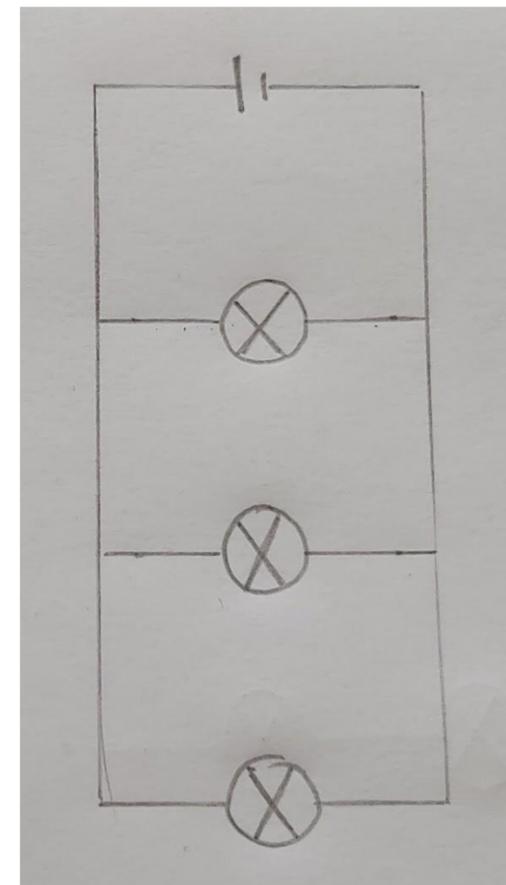
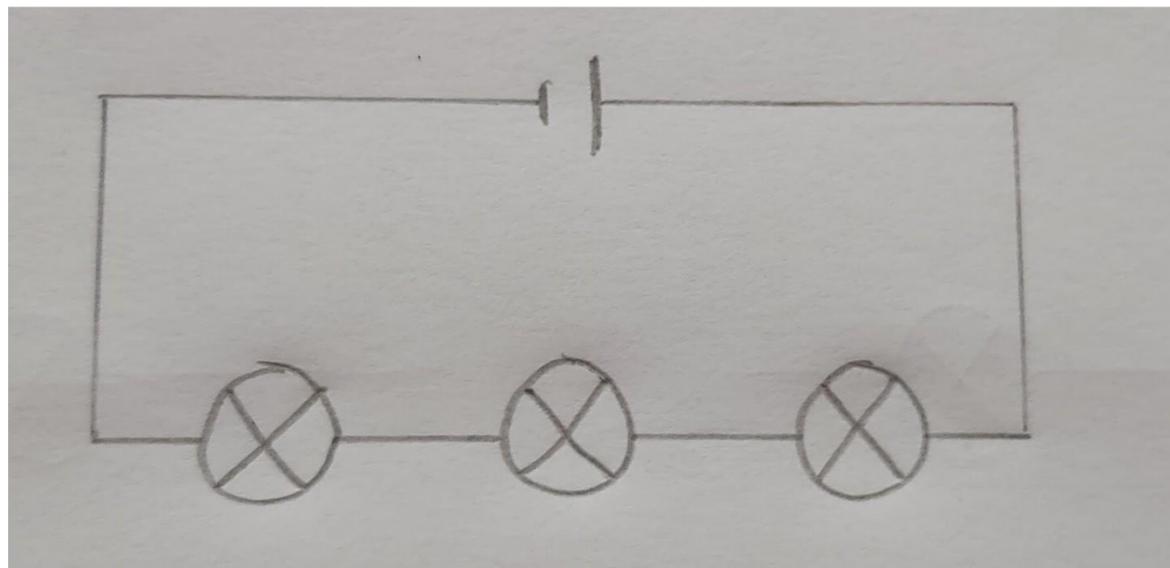
1. Name the two types of circuit

Series and Parallel

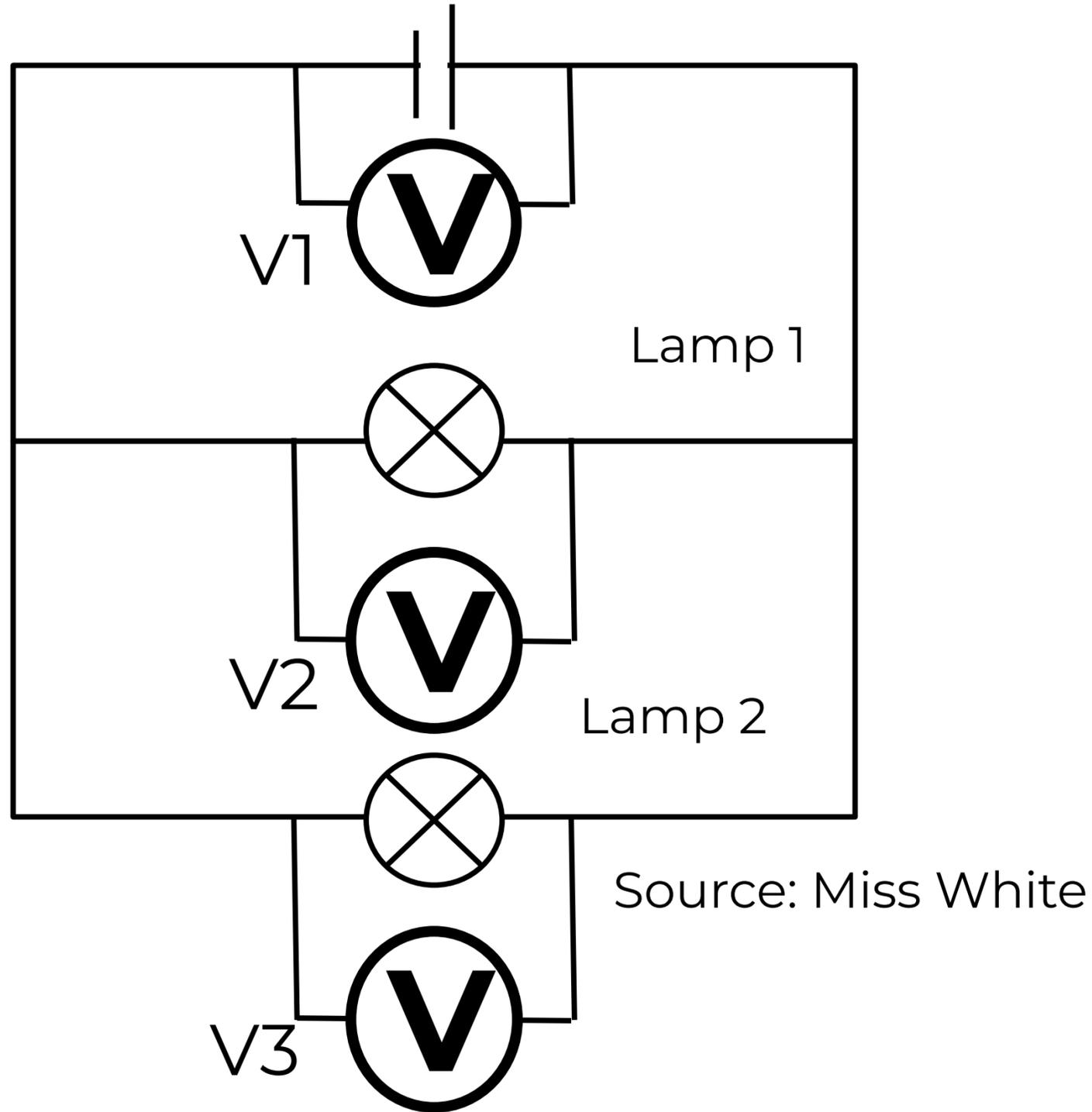
2. Describe the differences between them

Series circuits contain one loop whereas parallel circuits have two or more loops

3.



Investigating potential difference in parallel circuits - answers



Results - answers

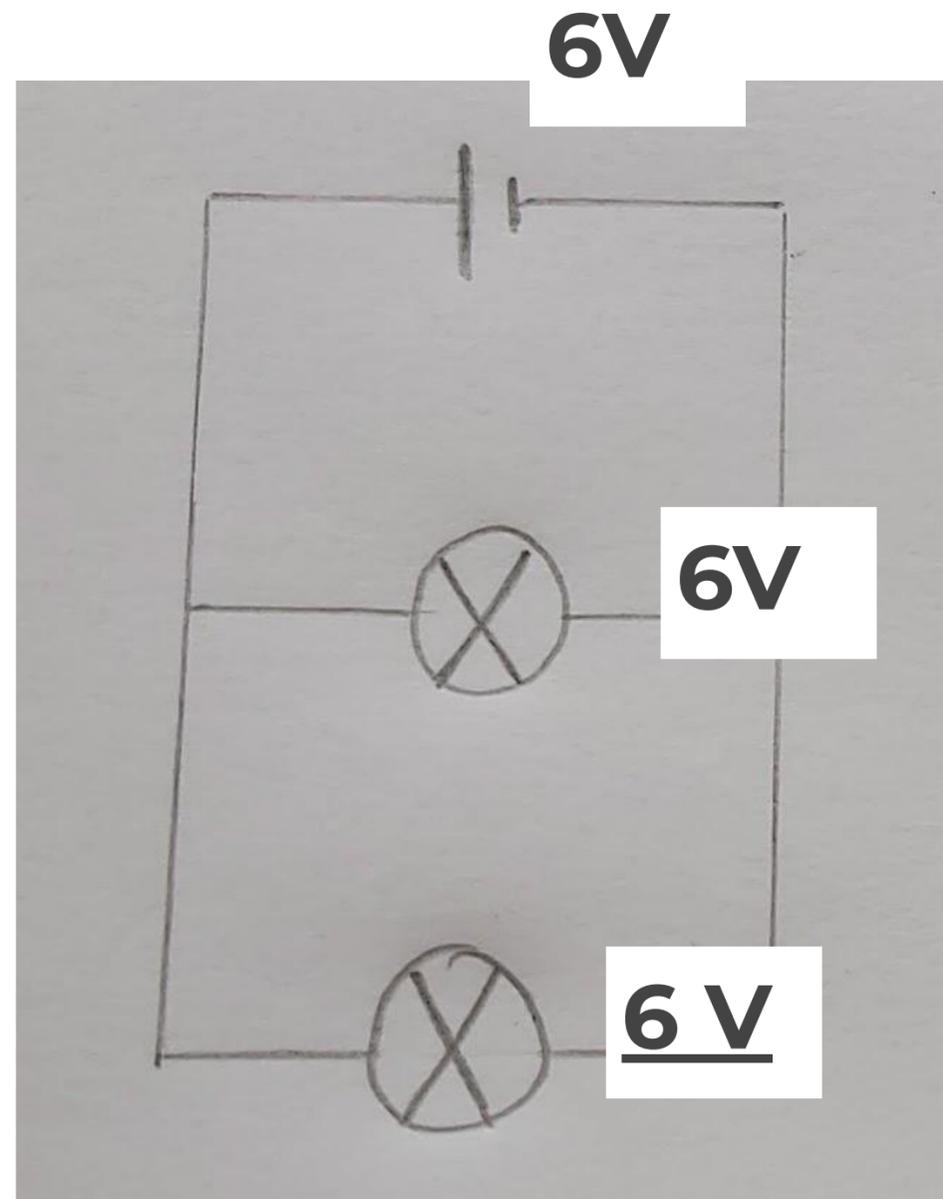
Here are the students results

- 1. The potential difference at all 3 positions is the same
- 2. The potential difference across each component is the same as the input voltage

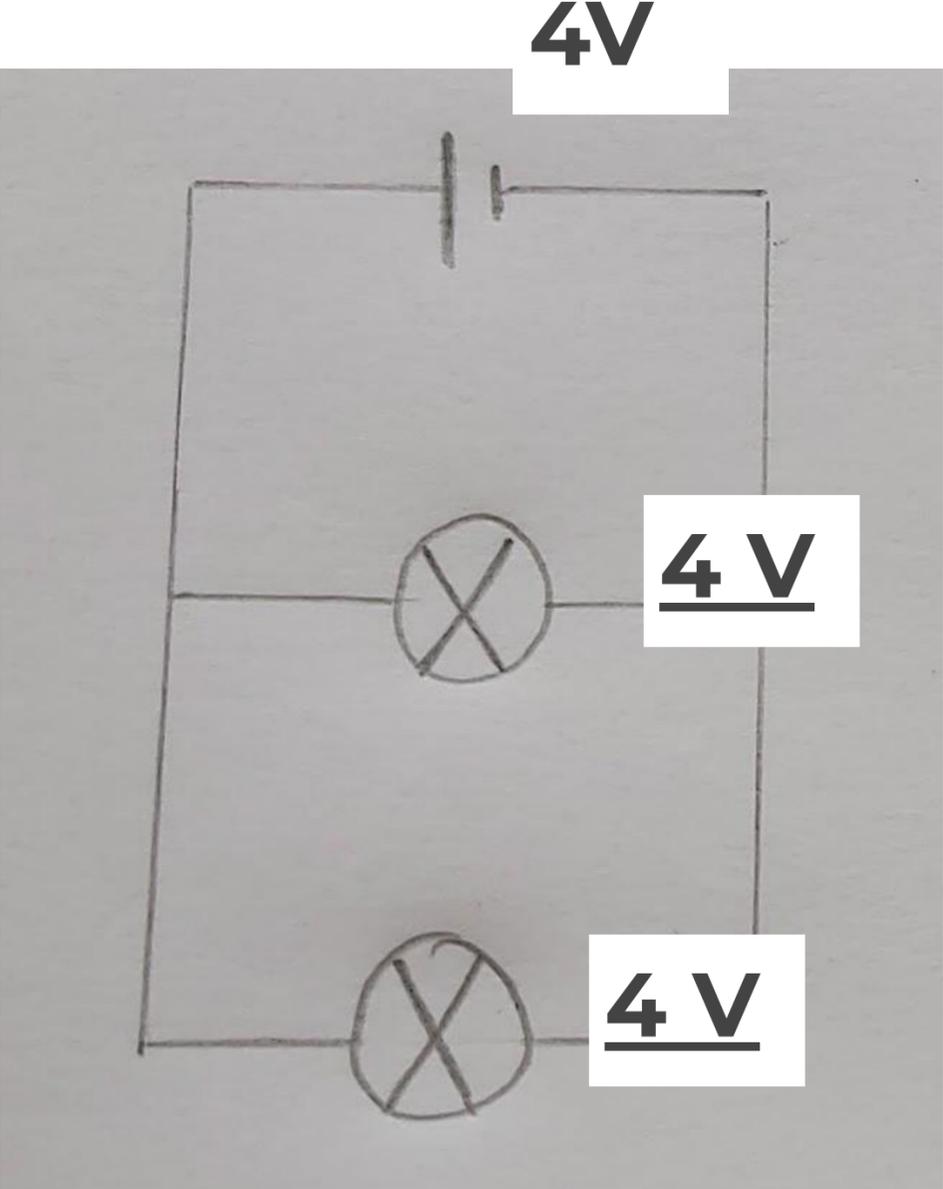
Position	Potential difference (V)
V1	6.00
V2	6.00
V3	6.00



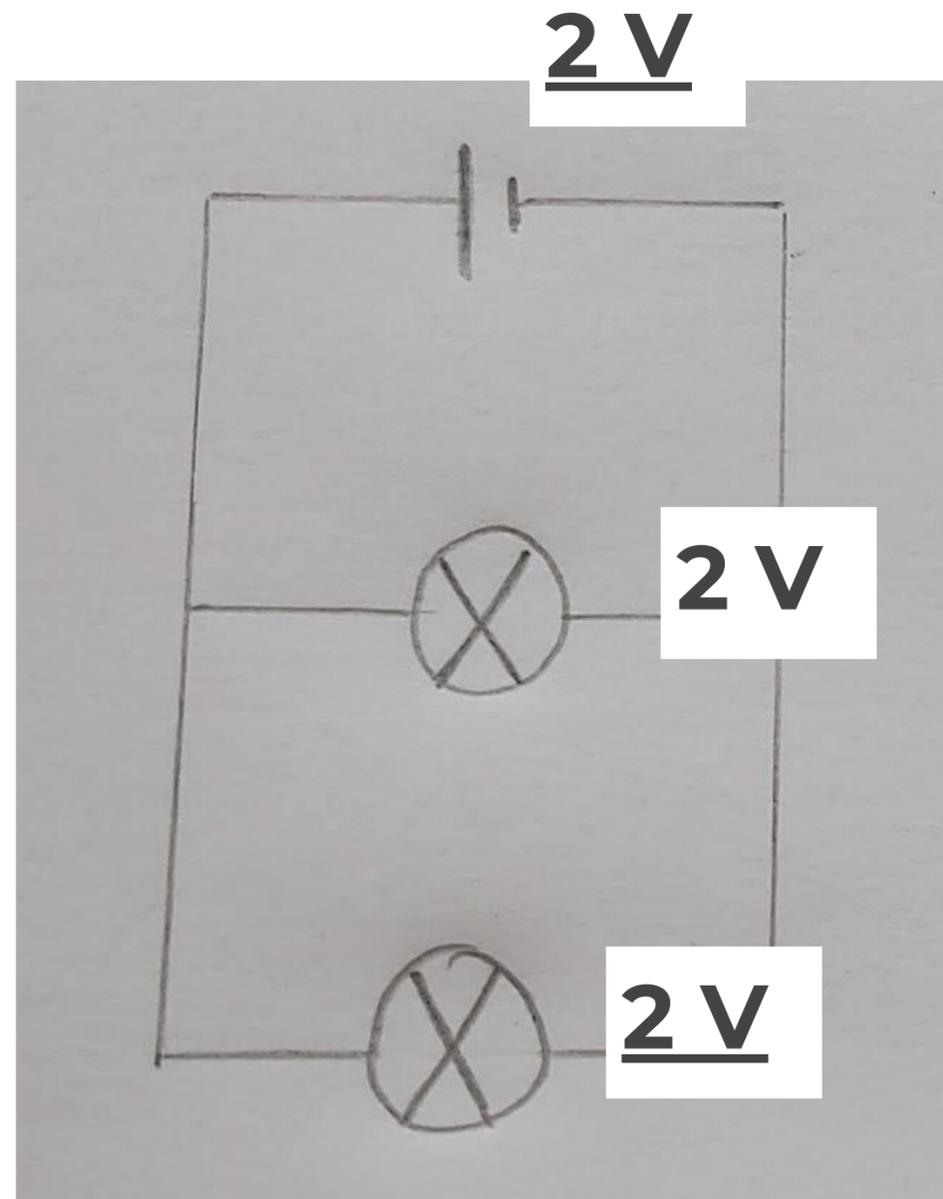
Calculate 1 - answers



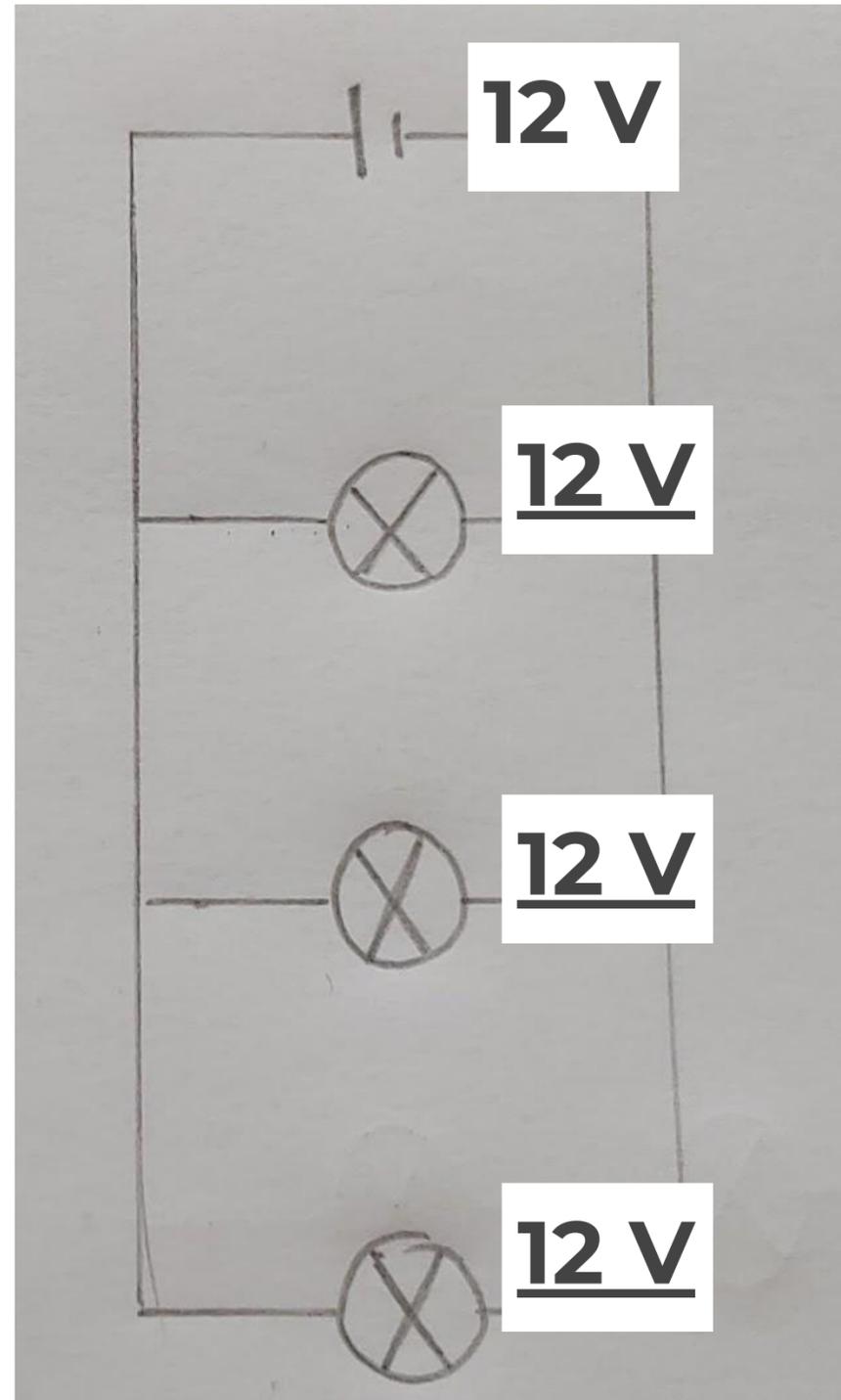
Calculate 2 - answers



Calculate 3 - answers



Calculate 4 - answers



Match- Up Task - answers

Series

Current is the same through all components

Total current from the cell equals sum of currents through the branches

Parallel

Potential difference is the same across each branch

Potential difference across the cell is the sum of the potential difference across the components

