Task

Answer the questions using steps 1,2 and 3. Look at the worked example below.

Example: What is the potential difference if the resistance is 3 Ω and the current is 4 A?

Step 1	Step 2	Step 3
Write down the equation you need: potential difference = current x resistance (V = IR)	Write down the information you are told in the question: potential difference = ? current = 4 A resistance = 3Ω	Put the values in the equation and do the calculation. You might need to rearrange the equation. potential difference = 4 x 3 potential difference = 12 V

1. A bulb in a circuit has a resistance of 2 Ω and a current of 0.6 A through it. Calculate the potential difference across it.

Step 1	Step 2	Step 3

2. What is the resistance if current is 3 A and potential difference is 1.5 V?

Step 1	Step 2	Step 3

3. Calculate the resistance of a motor when 12 V of potential difference is put across it and 2 A of current flows through it.

Step 1	Step 2	Step 3

4. The resistance of a heating element is 66 Ω. Calculate how much current it draws from the mains supply which is 231 V.

Step 1	Step 2	Step 3

5. Calculate resistance in a doorbell if 6 A flows through it and 120 V goes across it.

Step 1	Step 2	Step 3

6. If 0.4 A flows through a bulb and the potential difference from the battery is 3 V, what is the resistance of the bulb?

Step 1	Step 2	Step 3

7. When 3 V is supplied to a motor, a current of 0.1 A flows. What resistance does the motor have?

Step 1	Step 2	Step 3

Answers

1. 1.2V
2. 0.5 Ω
3. 6 Ω
4. 3.5 A
5. 20 Ω
6. 7.5 Ω
7. 30 Ω