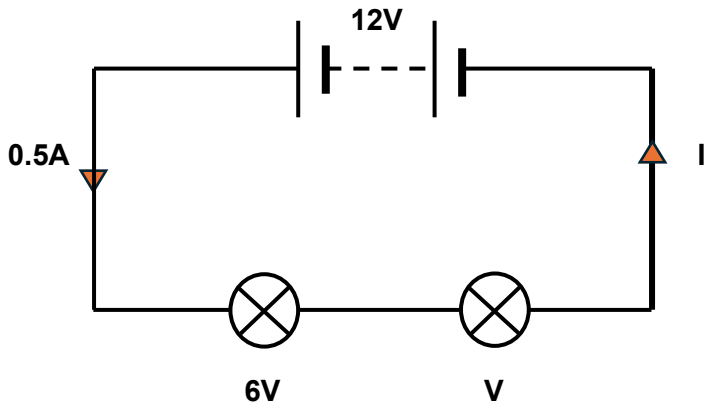
Series and Parallel Circuit Questions for GCSE Physics (ANSWERS)

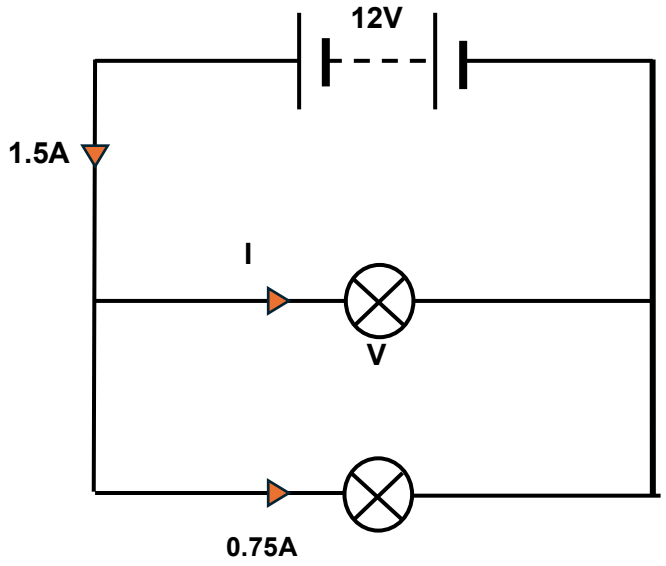
1. What are the values of *V* and *I* in this diagram?



I = …**0.5A**…*(the current is the same everywhere in series)*

V = …12 – 6 = **6V**…

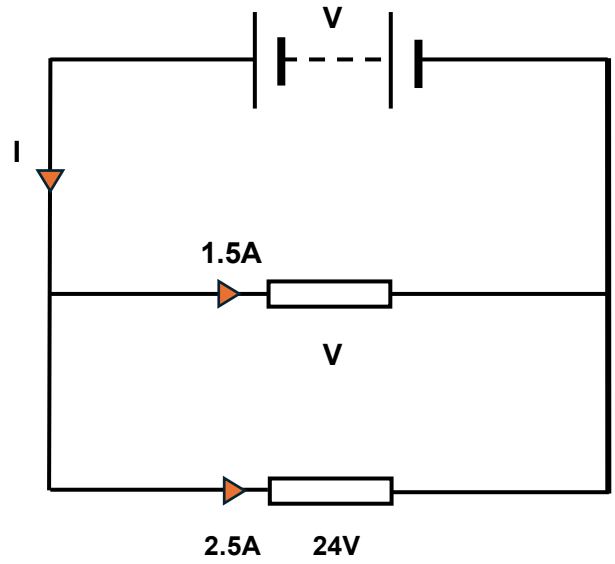
2. What are the values of *V* and *I* in this diagram?



I = …1.5 – 0.75 = **0.75A**…

V = …**12V**……

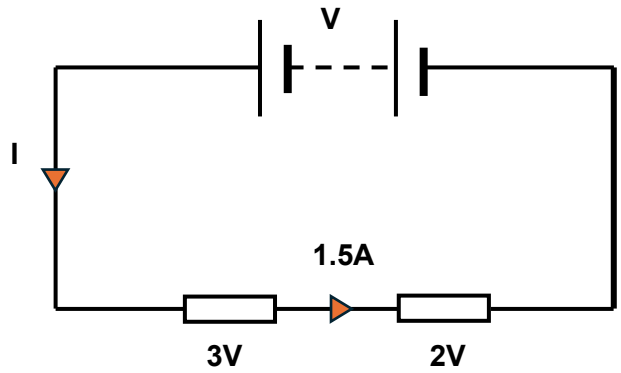
3. This diagram shows 2 different resistors in parallel. What are the values of current *I*, and voltage *V*?



I = …1.5 + 2.5 = **4A**…

V = …**24V**……

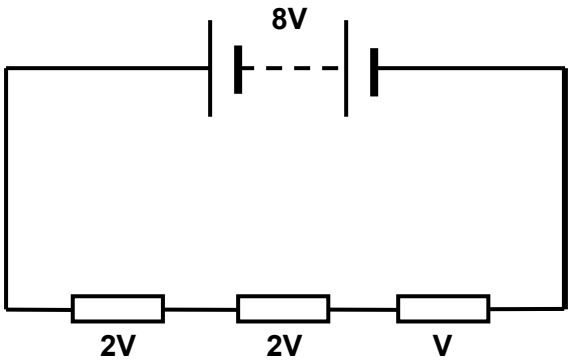
4. This diagram shows 2 different resistors in series. What are the values of current *I*, and voltage *V*?



I = …**1.5A**……

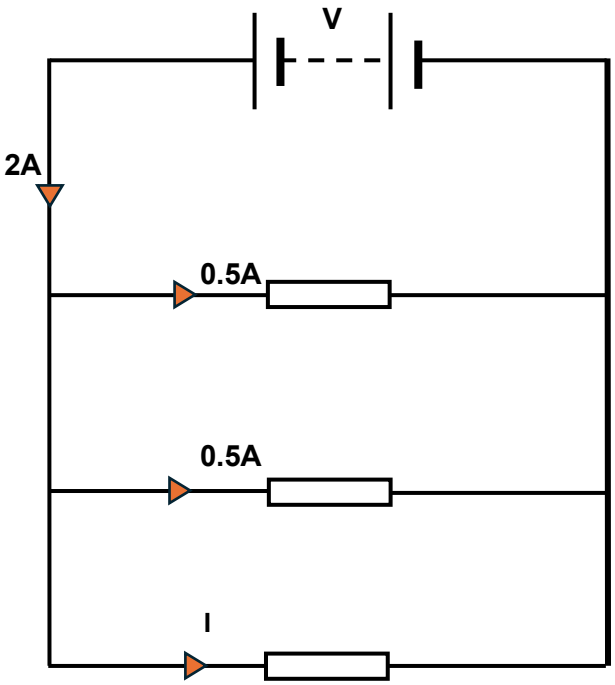
V = …3 + 2 = **5V**…

5. These resistors may have different values. What is the value of *V*?



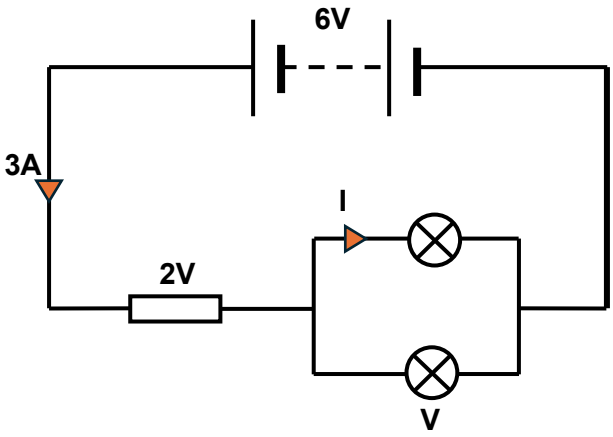
V = …8 - 2 - 2 = **4V**…

6. These resistors may have different values. What is the value of *I*?



I = …2 - 0.5 - 0.5 = **1A**…

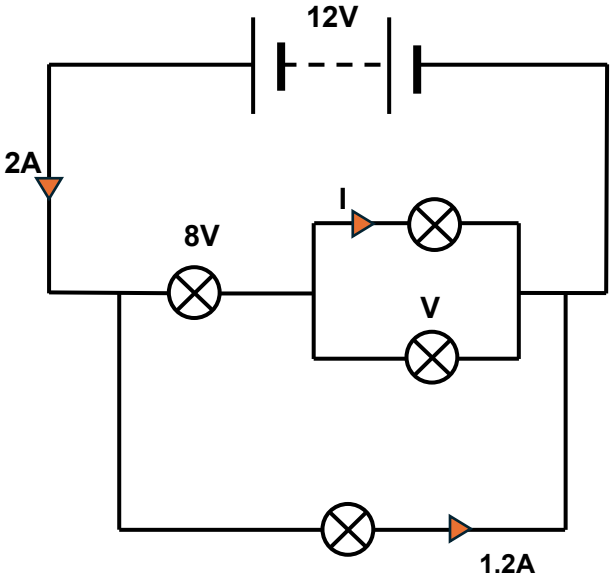
7. The two lamps in this diagram are identical. What are the values of *V* and *I*?



(3A splits in two)
I = …**1.5A**…

V = …6V - 2V = **4V**…

8. All the lamps are identical in this circuit. What are the values of *I* and *V*?



(2A – 1.2A = 0.8A which then splits)

I = ……**0.4A**……

V = …12V – 8V = **4V**…