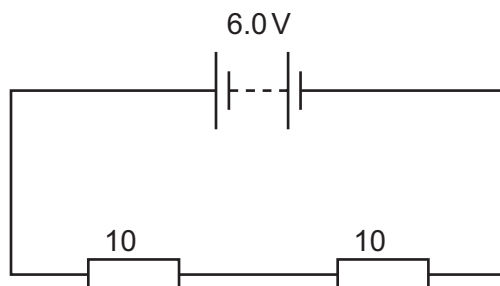


- 30 A battery of negligible internal resistance is connected to two 10 Ω resistors in series.

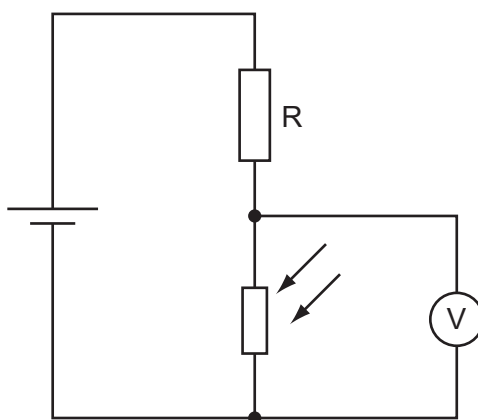


What charge flows through each of the 10 Ω resistors in 1 minute?

- A** 0.30 C **B** 0.60 C **C** 3.0 C **D** 18 C
- 31 Two wires P and Q have resistances R_P and R_Q respectively. Wire P is twice as long as wire Q and has twice the diameter of wire Q. The wires are made of the same material.

What is the ratio $\frac{R_P}{R_Q}$?

- A** 0.5 **B** 1 **C** 2 **D** 4
- 32 A potential divider consists of a fixed resistor R and a light-dependent resistor (LDR).



What happens to the voltmeter reading, and why does it happen, when the intensity of light on the LDR increases?

- A** The voltmeter reading decreases because the LDR resistance decreases.
B The voltmeter reading decreases because the LDR resistance increases.
C The voltmeter reading increases because the LDR resistance decreases.
D The voltmeter reading increases because the LDR resistance increases.