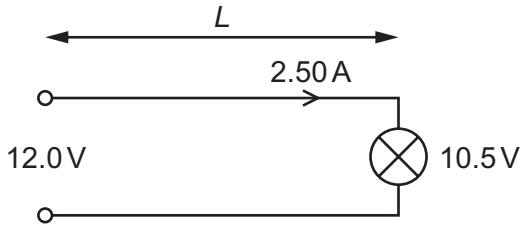
34 A cable of length L consisting of two wires is used to connect a 12.0 V power supply of negligible internal resistance to a lamp, as shown.



The potential difference across the lamp is 10.5 V. The current in the wire is 2.50 A.

Each wire is made of metal of resistivity $1.70 \times 10^{-8}\,\Omega\,\text{m}$ and has a cross-sectional area of $6.00 \times 10^{-7}\,\text{m}^2$.

What is the length L of the cable?

A 10.6 m **B** 21.2 m **C** 29.4 m **D** 58.8 m