

- 31** When the current in a wire is 5.0 A, the average drift speed of the conduction electrons in the wire is $7.4 \times 10^{-4} \text{ m s}^{-1}$.

Which row gives a possible cross-sectional area and number of conduction electrons per unit volume for this wire?

	cross-sectional area / m^2	number of conduction electrons per unit volume / m^{-3}
A	7.2×10^{-7}	1.2×10^{28}
B	7.2×10^{-7}	5.9×10^{28}
C	2.3×10^{-6}	7.3×10^{26}
D	2.3×10^{-6}	3.7×10^{27}

- 32** A fixed resistor of resistance 12 Ω is connected to a battery. There is a current of 0.20 A in the