33 The number density of conduction electrons in copper is $8.0 \times 10^{28}\,m^{-3}$.

What is the average drift speed of electrons in a copper wire of diameter 0.42 mm when the current in the wire is 0.57 A?

A $8.0 \times 10^{-11}\,m\,s^{-1}$

B $3.2 \times 10^{-10}\,m\,s^{-1}$

C $8.0 \times 10^{-5}\,m\,s^{-1}$

D $3.2 \times 10^{-4}\,m\,s^{-1}$