31 A straight copper wire of diameter 0.42×10^{-3} m has a number density of free electrons of $8.5 \times 10^{28}\,\text{m}^{-3}$. In a given time interval, a charge of 0.15 C moves through the wire.

What is the average displacement of the free electrons along the wire in this time interval?

A 3.3×10^{-8} m **B** 2.0×10^{-5} m **C** 8.0×10^{-5} m **D** 2.5×10^{-4} m