17 Free electrons flow along a copper wire X of radius 5.0×10^{-5} m with an average drift speed of 2.8×10^{-2} m s^{-1}. The current in the wire is 3.0 A.

There is a current of 2.0 A in a copper wire Y of radius 1.0×10^{-4} m.

What is the average drift speed of the free electrons in copper wire Y?

A 4.7×10^{-3} m s^{-1}

B 9.3×10^{-3} m s^{-1}

C 1.1×10^{-2} m s^{-1}

D 1.9×10^{-2} m s^{-1}