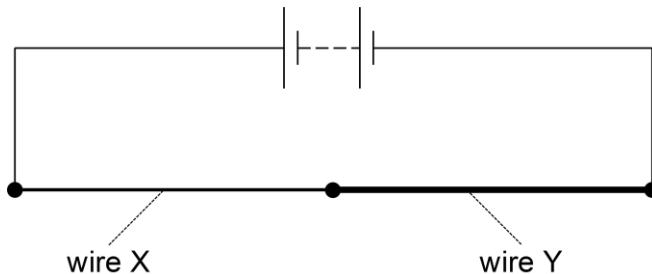


- 21** Two wires, X and Y, are made from the same metal. The diameter of wire Y is twice that of wire X.

Both wires are connected in series to a battery as shown.



What is the ratio  $\frac{\text{average drift speed of free electrons in wire Y}}{\text{average drift speed of free electrons in wire X}}$ ?

**A** 0.25

**B** 0.50

**C** 2.0

**D** 4.0