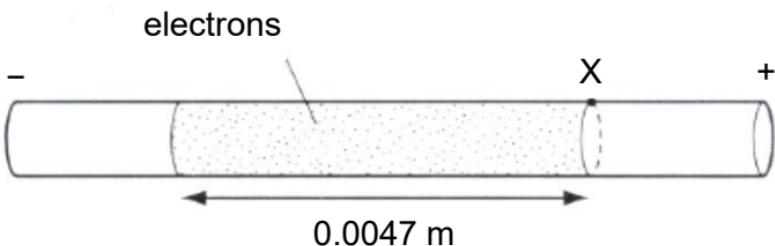


- 20** Copper has 8.5×10^{28} conduction electrons per cubic metre. A piece of copper wire has an area of cross-section $3.2 \times 10^{-7} \text{ m}^2$.



When a potential difference is applied to the wire, the electrons within a cylinder of length of 0.0047 m all pass point X in 60 s.

What is the current in the wire?

- A** 0.34 A
- B** 2.0 A
- C** 20 A
- D** 340 A

- 21** Two cells of e.m.f. E_1 and E_2 have internal resistances R_1 and zero respectively. The cells