

- 31** Two wires P and Q made of the same material and of the same length are connected in parallel to the same voltage supply. Wire P has diameter 2 mm and wire Q has diameter 1 mm.

What is the ratio  $\frac{\text{current in P}}{\text{current in Q}}$  ?

**A**  $\frac{1}{4}$

**B**  $\frac{1}{2}$

**C**  $\frac{2}{1}$

**D**  $\frac{4}{1}$

- 32** An electric power cable consists of six copper wires surrounding a steel core.