

**32** An iron wire has length 8.0 m and diameter 0.50 mm. The wire has resistance  $R$ .

A second iron wire has length 2.0 m and diameter 1.0 mm.

What is the resistance of the second wire?

**A**  $\frac{R}{16}$

**B**  $\frac{R}{8}$

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

**D**  $R$