

33 A metal wire has a length of 2.50 m and a cross-sectional area of  $4.50 \times 10^{-6} \text{ m}^2$ . The resistivity of the metal is  $3.50 \times 10^{-7} \Omega\text{m}$ .

The wire is stretched so that its length increases to 2.65 m. The wire remains cylindrical and the **volume** of the wire remains constant.

What is the change in the resistance of the wire?

A  $0.012\Omega$

B  $0.024\Omega$

C  $0.19\Omega$

D  $0.22\Omega$