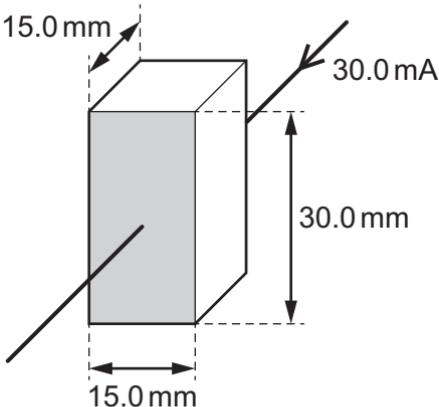


- 4 The current in a block of semiconductor is 30.0 mA when there is a potential difference (p.d.) of 10.0 V across it. The dimensions of the block and the direction of the current in it are as shown.



The electrical meters used are accurate to  $\pm 0.1$  mA and  $\pm 0.1$  V. The dimensions of the block are accurate to  $\pm 0.2$  mm.

What is the resistivity of the semiconductor?

- A  $10.0 \pm 0.2 \Omega \text{ m}$
- B  $10.0 \pm 0.3 \Omega \text{ m}$
- C  $10.0 \pm 0.5 \Omega \text{ m}$
- D  $10.0 \pm 0.8 \Omega \text{ m}$

- 5 The diameter of a cylindrical metal rod is measured using a micrometer screw gauge.