

- 9 A student attempts to find the density  $\rho$  of aluminium by taking measurements of a rectangular sheet.

mass  $m = 51.6 \pm 0.1 \text{ g}$

length  $l = 100.0 \pm 0.1 \text{ cm}$

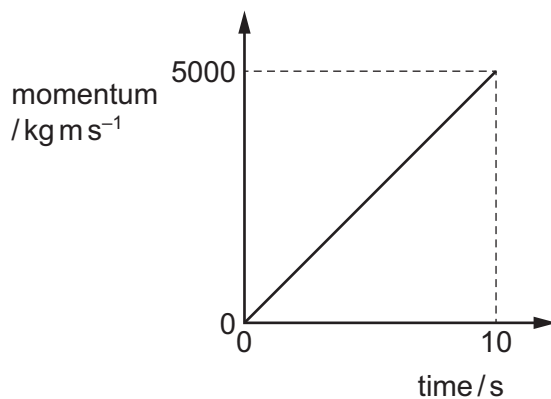
width  $w = 10.0 \pm 0.1 \text{ cm}$

thickness  $t = 0.20 \pm 0.01 \text{ mm}$

He uses the equation  $\rho = \frac{m}{wlt}$  to calculate the density.

What is the calculated value of density with its uncertainty?

- A**  $0.26 \pm 0.01 \text{ g cm}^{-3}$
- B**  $0.26 \pm 0.02 \text{ g cm}^{-3}$
- C**  $2.6 \pm 0.1 \text{ g cm}^{-3}$
- D**  $2.6 \pm 0.2 \text{ g cm}^{-3}$
- 10 The graph shows how the momentum of a motorcycle changes with time.



What is the resultant force on the motorcycle?

- A** 500 N      **B** 5000 N      **C** 25 000 N      **D** 50 000 N