

- 4 A student intends to measure accurately the diameter of a wire (known to be approximately 1 mm) and the internal diameter of a pipe (known to be approximately 2 cm).

What are the most appropriate instruments for the student to use to make these measurements?

	wire	pipe
<b>A</b>	calipers	calipers
<b>B</b>	calipers	micrometer
<b>C</b>	micrometer	calipers
<b>D</b>	micrometer	micrometer

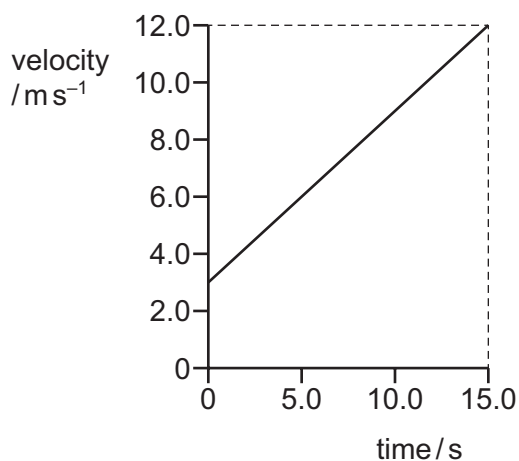
- 5 The power  $P$  dissipated in a resistor of resistance  $R$  is calculated using the expression

$$P = \frac{V^2}{R}$$

where  $V$  is the potential difference (p.d.) across the resistor. The percentage uncertainty in  $V$  is 5% and in  $R$  is 2%.

What is the percentage uncertainty in  $P$ ?

- A** 3%                      **B** 7%                      **C** 8%                      **D** 12%
- 6 The velocity-time graph for an object of mass 2.5 kg is shown.



What is the resultant force acting on the object?

- A** 0.60 N                      **B** 0.80 N                      **C** 1.5 N                      **D** 2.0 N