1 What is needed to accurately represent all physical quantities?

A a base unit and a number

B a unit and a number expressed in standard form (scientific notation)

C a unit and a numerical magnitude

D an SI unit and a numerical magnitude

2 A voltmeter connected across a resistor in a circuit reads 3.6 V.

What could be the current in the resistor and the resistance of the resistor?

	current	resistance
A	150 mA	0.24 kΩ
B	15 mA	2.4 kΩ
C	1.5 mA	0.24 MΩ
D	15 μA	240 kΩ

3 In an experiment to determine the acceleration of free fall *g*, the time *t* taken for a ball to fall through distance *s* is measured. The percentage uncertainty in the measurement of *s* is 2%. The percentage uncertainty in the measurement of *t* is 3%.

The value of *g* is determined using the equation shown.

$$g = \frac{2s}{t^2}$$

What is the percentage uncertainty in the calculated value of *g*?

A 1% **B** 5% **C** 8% **D** 11%

4 Which quantity is a vector?

A momentum

B speed

C temperature

D Young modulus