

1 What represents a physical quantity?

- A 3.0
- B kilogram
- C 7.0 N
- D 40%

2 The relationship between the variables  $D$  and  $T$  is given by the equation

$$\frac{1}{T} = \frac{b}{\sqrt{D}} + c$$

where  $b$  and  $c$  are constants.

The unit of  $D$  is  $\text{m}^2$  and the unit of  $T$  is s.

What are the units of  $b$  and  $c$ ?

	unit of $b$	unit of $c$
A	ms	s
B	$\text{ms}^{-1}$	$\text{s}^{-1}$
C	$\text{m}^{-1}\text{s}$	s
D	$\text{m}^{-1}\text{s}^{-1}$	$\text{s}^{-1}$

3 A hollow cylinder, which is open at both ends, has a radius of  $(3.0 \pm 0.1)\text{cm}$  and a length of  $(15.0 \pm 0.1)\text{cm}$ .

What is the value, with its absolute uncertainty, of the surface area of the cylinder?

- A  $(280 \pm 10)\text{cm}^2$
- B  $(282.7 \pm 0.2)\text{cm}^2$
- C  $(420 \pm 30)\text{cm}^2$
- D  $(424.1 \pm 0.3)\text{cm}^2$