Cambridge Assessment International Education

Cambridge IGCSE™

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER				

5387189052

CAMBRIDGE INTERNATIONAL MATHEMATICS **0607/11**

Paper 1 (Core) **October/November 2021**

45 minutes

You must answer on the question paper.

You will need: Geometrical instruments

INSTRUCTIONS

- Answer **all** questions.
- Use a black or dark blue pen. You may use an HB pencil for any diagrams or graphs.
- Write your name, centre number and candidate number in the boxes at the top of the page.
- Write your answer to each question in the space provided.
- Do **not** use an erasable pen or correction fluid.
- Do **not** write on any bar codes.
- Calculators must **not** be used in this paper.
- You may use tracing paper.
- You must show all necessary working clearly and you will be given marks for correct methods even if your answer is incorrect.
- All answers should be given in their simplest form.

INFORMATION

- The total mark for this paper is 40.
- The number of marks for each question or part question is shown in brackets [ ].

This document has **8** pages.

DC (RW/CB) 207176/3

[Turn over

Formula List

Area, A, of triangle, base b, height h.	$A = \frac{1}{2}bh$
Area, A, of circle, radius r.	$A = \pi r^2$
Circumference, C, of circle, radius r.	$C = 2\pi r$
Curved surface area, A, of cylinder of radius r, height h.	$A = 2\pi rh$
Curved surface area, A, of cone of radius r, sloping edge l.	$A = \pi rl$
Curved surface area, A, of sphere of radius r.	$A = 4\pi r^2$
Volume, V, of prism, cross-sectional area A, length l.	$V = Al$
Volume, V, of pyramid, base area A, height h.	$V = \frac{1}{3}Ah$
Volume, V, of cylinder of radius r, height h.	$V = \pi r^2 h$
Volume, V, of cone of radius r, height h.	$V = \frac{1}{3}\pi r^2 h$
Volume, V, of sphere of radius r.	$V = \frac{4}{3}\pi r^3$

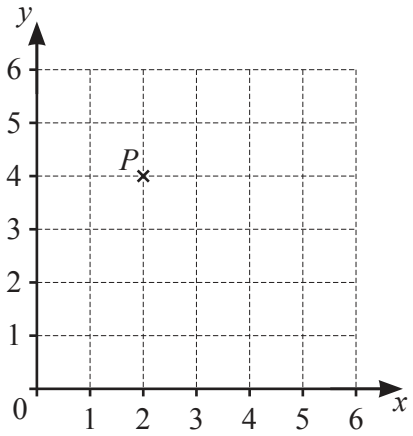
Answer **all** the questions.

1 Write the missing numbers in the boxes.

$$\frac{1}{5} = \frac{\square}{10} = \frac{20}{\square} = \square\,\%$$

[2]

2

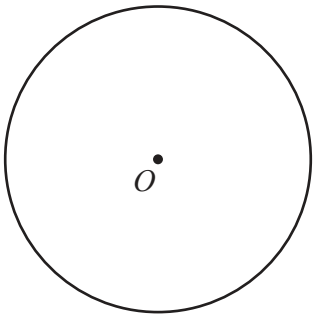


Write down the coordinates of P.

(..... , ...) [1]

3 The diagram shows a circle with centre O.

Draw a chord in this circle.

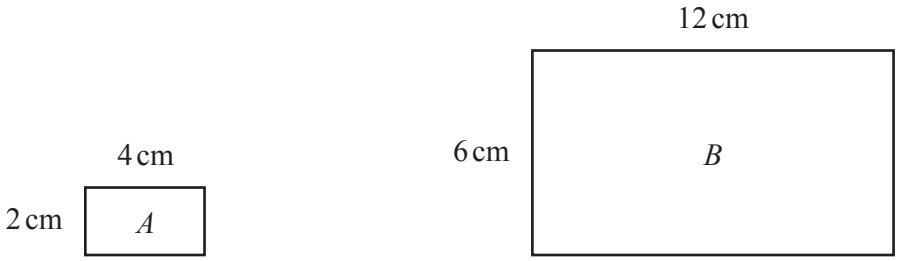


[1]

4 Complete the statement.

45 ml is ..... cm^3. [1]

5



NOT TO SCALE

Complete the statement.

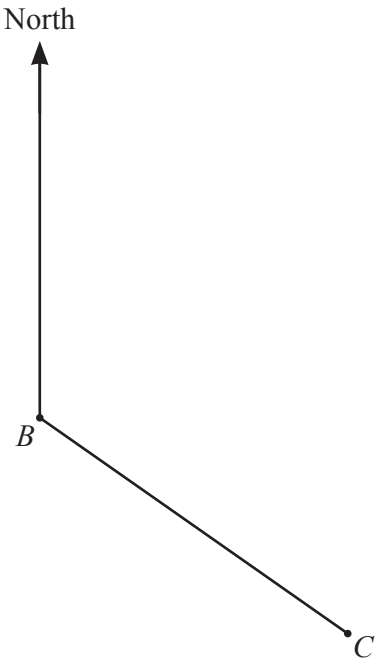
Rectangle B is an enlargement of rectangle A with scale factor ..... [1]

6 In a sale, the price of a dress is reduced from \$20 to \$15.

Work out the percentage reduction.

.....% [2]

7



Measure the bearing of C from B.

..... [1]

8 A cuboid has a volume of $140\,cm^3$.
The width of the cuboid is 7 cm and the height is 2 cm.

Find the length of this cuboid.

..... cm [2]

9 This table shows the ages of 20 cars.

Age (years)	Frequency
1	2
2	7
3	4
4	3
5	4

(a) Work out the range.

..... years [1]

(b) Work out the mean age of the cars.

..... years [3]

10 $-6 \leqslant x < -3$

Write down all the integer values of x.

..... [1]

11 A circle has radius 8.5 cm.

Find the circumference of the circle.
Leave your answer in terms of π.

..... cm [2]

12 $\mathsf{U} = \{x \mid x \text{ is an integer and } 1 \leqslant x \leqslant 10\}$
$A = \{x \mid x \text{ is a square number}\}$

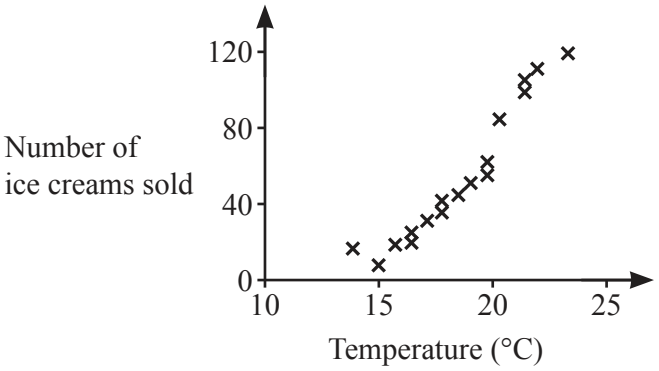
(a) List the elements of set A.

..... [1]

(b) Write down $\mathrm{n}(A')$.

..... [1]

13 The scatter diagram shows the number of ice creams sold each day and the temperature on that day.



(a) What type of correlation is shown in the scatter diagram?

..... [1]

(b) Describe what the scatter diagram shows about the number of ice creams sold each day and the temperature on that day.

.....

..... [1]

14 A football club had the following results from their last 10 games.

Outcome of Match	Win	Draw	Lose
Frequency	2	5	3

Use this data to estimate the probability that they will **not** lose their next match.

..... [2]

15 Expand.

$$k^2(k-6)$$

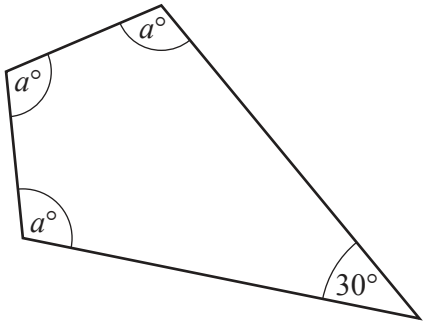
..... [2]

16 A car travels 20 km at an average speed of 30 km/h.
It then travels 30 km at an average speed of 60 km/h.

Calculate the total number of minutes this 50 km journey takes.

..... minutes [3]

17



NOT TO
SCALE

Find the value of a.

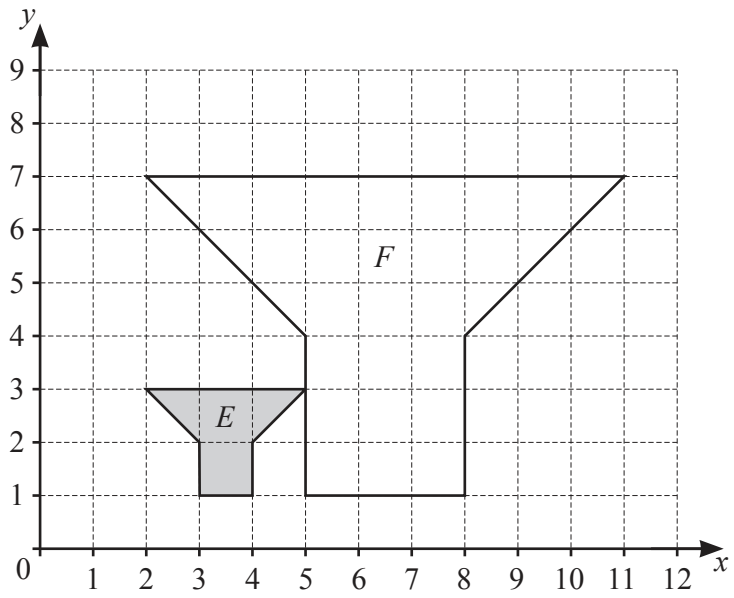
$a =$ ..... [3]

18 Work out $(3 \times 10^4) \times (5 \times 10^6)$.
Write your answer in standard form.

..... [2]

Questions 19, 20 and 21 are printed on the next page.

19



Describe fully the **single** transformation that maps shape E onto shape F.

.....

..... [3]

20 Write down the equation of the line with gradient 3 that passes through $(0, -1)$.

..... [2]

21 Find the value of x when $5^3 \times 5^4 = 5^x$.

$x =$ ..... [1]