Cambridge Assessment International Education

Cambridge IGCSE™

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8198260037

CAMBRIDGE INTERNATIONAL MATHEMATICS **0607/12**

Paper 1 (Core) **May/June 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.

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[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.	$V = \frac{4}{3}\pi r^3$

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Answer **all** the questions.

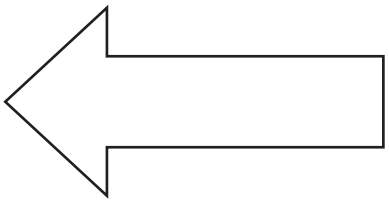
1 Write 3262.7 correct to the nearest 100.

..... [1]

2 Write down the value of 6^2.

..... [1]

3



On the diagram, draw the line of symmetry. [1]

4

-0.2 $\quad \frac{2}{3} \quad$ 2 $\quad \sqrt{2} \quad$ 2.1

From the list of numbers, write down the integer.

..... [1]

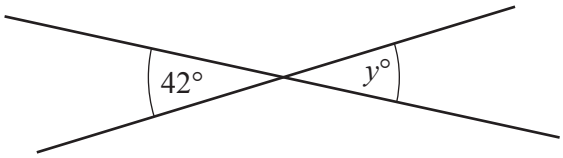
5 Write the missing number in the box.

$$\frac{16}{20} = \frac{\square}{5}$$

[1]

6

NOT TO SCALE



The diagram shows two straight lines.

Write down the value of y.

$y =$ ..... [1]

7 Work out.

$17 - 3 \times 2$

..... [1]

8 The list shows the ages of six people.

8 10 76 8 10 8

(a) Write down the mode.

..... [1]

(b) Find the range.

..... [1]

(c) Find the median.

..... [1]

(d) Find the mean.

..... [2]

9 $F = ma$

Find F when $m = 25$ and $a = 3$.

$F =$ ..... [1]

10 $f(x) = (2x - 3)(x - 1)$

Work out $f(7)$.

..... [2]

11 Write the ratio 18 : 24 in its simplest form.

..... : ..... [1]

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12 $A = \{1, 2, 3, 4, 5\}$

$B = \{2, 3\}$

Complete the following statements using set notation.

B ..... A

5 ..... A [2]

13 A bus travels at an average speed of 70 km/h.

Find the distance it travels in 4 hours.

..... km [1]

14 Priya invests \$4500 for 3 years at a rate of 2% per year **simple** interest.

Work out the value of Priya's investment at the end of 3 years.

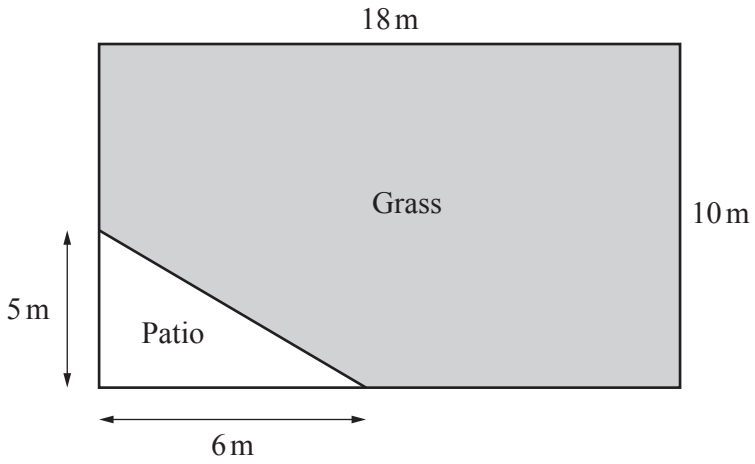
\$ ..... [3]

15 Solve the equation.

$5(x + 3) = 30$

$x =$ ..... [2]

16



NOT TO SCALE

The diagram shows the rectangular garden of a house.

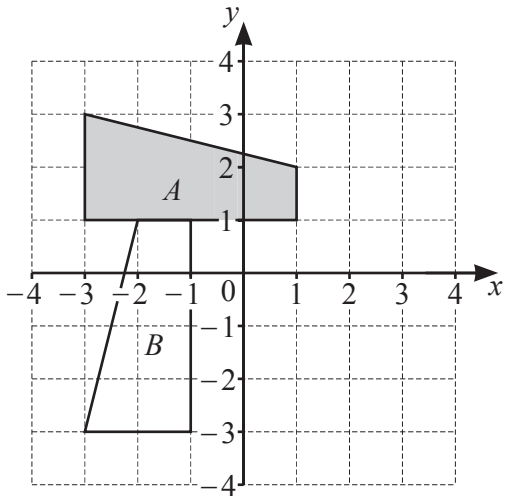
Work out the area of the grass.

..... m^2 [2]

17 Change 46 square centimetres into square millimetres.

..... mm^2 [1]

18



Describe fully the **single** transformation that maps shape *A* onto shape *B*.

.....

..... [3]

19 These are the first five numbers in a sequence.

1 3 9 27 81

(a) Find the next number in this sequence.

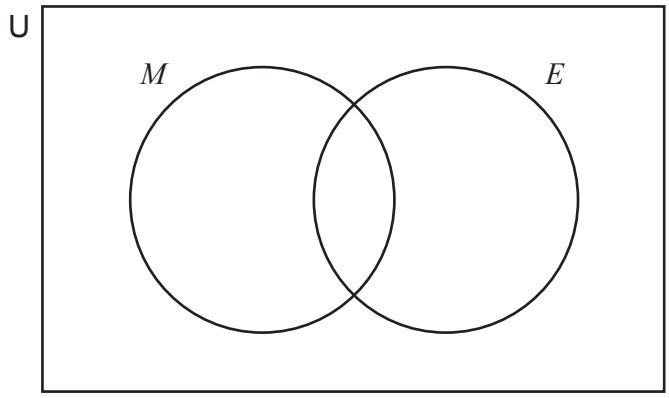
..... [1]

(b) Explain how you found your answer to **part (a)**.

..... [1]

20 150 students are asked whether they study mathematics (M) or English (E).
10 study neither subject, 15 study both subjects and 50 study mathematics only.

(a) Complete the Venn diagram to show all 150 students.



[2]

(b) One of the 150 students is selected at random.

Find the probability that this student studies English.
Give your answer as a fraction in its simplest form.

..... [2]

Questions 21 and 22 are printed on the next page.

21 Work out.

$$\frac{8\times10^{17}}{4\times10^{6}}$$

Write your answer in standard form.

..... [2]

22 Solve the simultaneous equations.

$$x+y=6$$
$$x-y=16$$

$x =$ .....

$y =$ ..... [2]

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