Cambridge Assessment International Education

Cambridge IGCSE™

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5052033185

CAMBRIDGE INTERNATIONAL MATHEMATICS **0607/12**

Paper 1 (Core) **May/June 2023**

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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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 down **two** multiples of 15.

..... , ... [1]

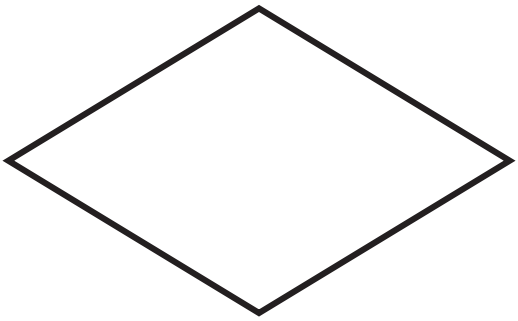
2 These are the temperatures of four cities.

$-4\,°C$ $-8\,°C$ $-2\,°C$ $-6\,°C$

Complete this statement.

The coldest city has a temperature of ..... °C. [1]

3 Draw all the lines of symmetry on the rhombus.



[2]

4 8 customers review a restaurant and give it a mark out of ten.

These are the marks.

1 6 5 9 5 7 4 3

(a) Find the mean.

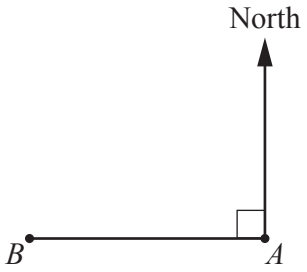
..... [2]

(b) Find the range.

..... [1]

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5



(a)

north-east	east	south-east	south	south-west	west	north-west

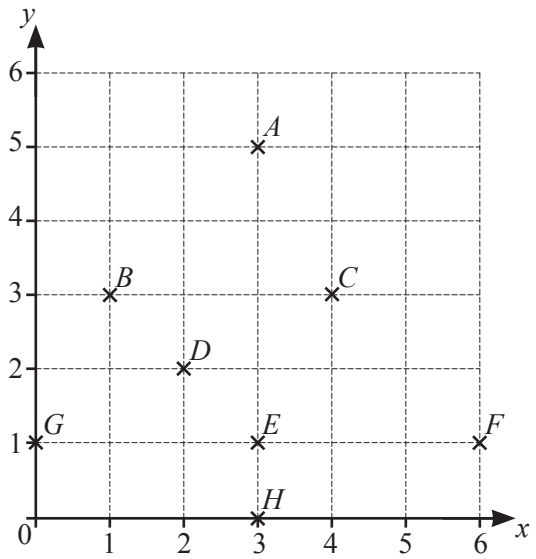
From the list above complete the following statement.

B is ..... of *A*. [1]

(b) Write down the three-figure bearing of *B* from *A*.

..... [1]

6



Complete each statement using a letter from *A* to *H*.

(a) The *x*-coordinate and *y*-coordinate of point ..... are the same. [1]

(b) The *y*-coordinate of point ..... is 0. [1]

(c) Point ..... is the mid-point of *FG*. [1]

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7 The table shows examples of data collected.

Data Collected	Type of Data
Mass of honey collected from a beehive.	
Number of tomatoes collected from a tomato plant.	
Time taken for chicken eggs to hatch.	

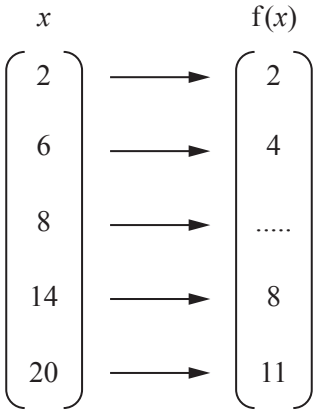
Complete the table using the words Continuous or Discrete. [2]

8 Circle P has a diameter of 5 cm.
Circle Q has a diameter of 20 cm.

Find the scale factor of the enlargement from circle P to circle Q.

..... [1]

9 Complete the mapping diagram.



[1]

10 Simplify.

$h - 4h$

..... [1]

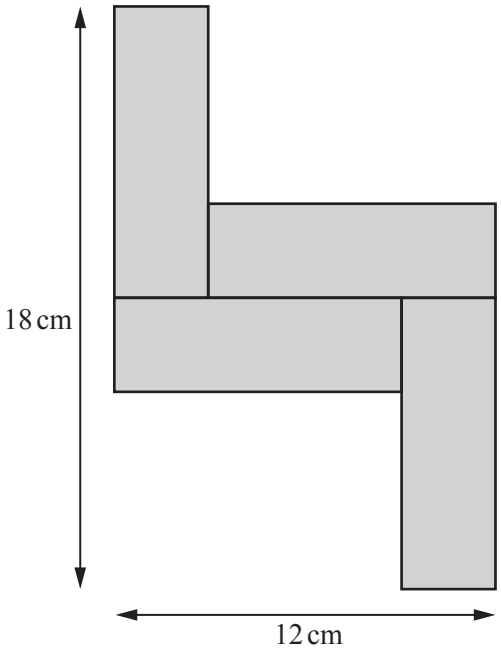
11 Write down a prime number between 50 and 60.

..... [1]

12 Work out 5% of \$4500.

\$ ..... [2]

13



NOT TO SCALE

The diagram shows a shape made from four identical rectangles.

Work out the shaded area.

..... cm^2 [3]

14 $\mathsf{U} = \{x \mid x \text{ is an integer where } 0 < x < 9\}$
$A = \{x \mid x \text{ is a factor of } 8\}$

List the elements of set A'.

..... [2]

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15 The circumference of a circle is 10π cm.

Work out the radius of the circle.

..... cm [2]

16 Change 780 square millimetres into square centimetres.

..... cm^2 [1]

17 Axel has a mass of 60 kg and Bruno has a mass of x kg.
The ratio mass of Axel : mass of Bruno = 2 : 3.

Work out the value of x.

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

18 These are the first five terms in a sequence.

6 11 16 21 26

Find the nth term.

..... [2]

19 Simplify.

$r \times r^2$

..... [1]

Questions 20, 21, 22 and 23 are printed on the next page.

20 $y = x$ and $y - x = 3$ are the equations of two parallel lines.

Write down the gradient of these lines.

..... [1]

21 The probability of rolling a six on a biased die is $\frac{4}{25}$.
The die is rolled 300 times.

Find an estimate for the number of sixes rolled.

..... [2]

22 Solve $3x - 1 < 2x + 8$.

..... [2]

23 Work out $3\frac{1}{7} \times \frac{2}{9}$.

..... [2]

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