Cambridge Assessment International Education

Cambridge IGCSE™

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER				

4049400834

CAMBRIDGE INTERNATIONAL MATHEMATICS **0607/11**

Paper 1 (Core) **May/June 2024**

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 2 3 12 40 60

From the list of numbers, write down all the multiples of 6.

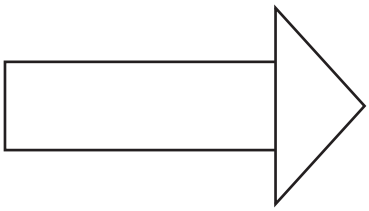
..... [1]

2 A bucket contains 9000 millilitres of water.

Write down the number of litres of water in the bucket.

..... litres [1]

3

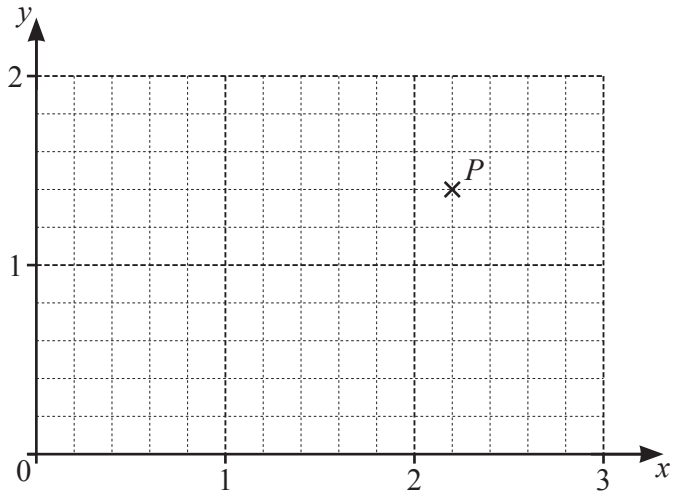


The diagram shows a shape made from a rectangle and a triangle.

(a) On the diagram, draw arrows on two lines that are parallel. [1]

(b) On the diagram, mark an acute angle. [1]

4

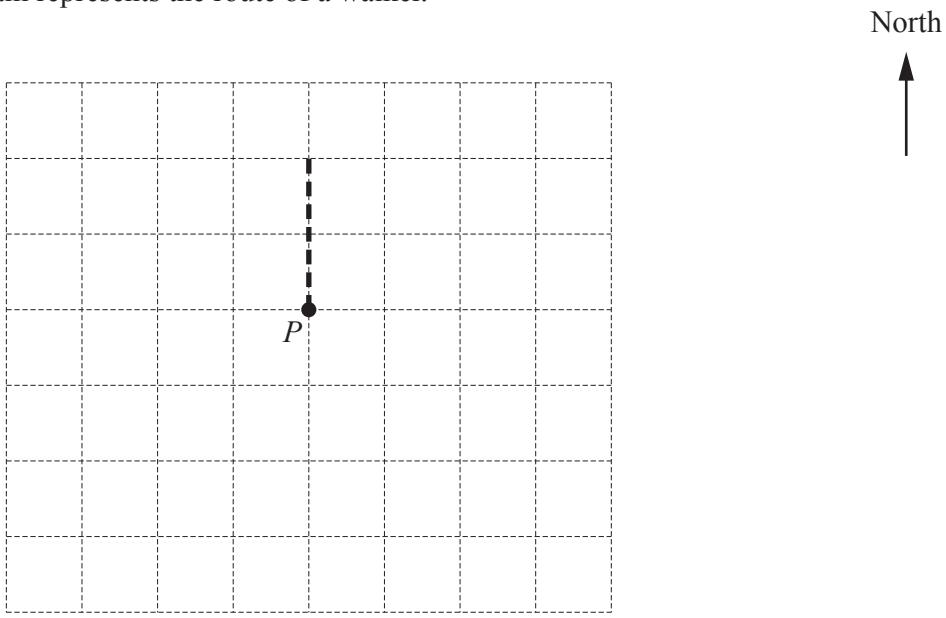


(a) Write down the coordinates of the point P.

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

(b) Plot the point (1.2, 1). [1]

5 The diagram represents the route of a walker.



A walker starts at point *P* on the diagram and walks:

- 2 squares north, as shown by the dotted line then
- 3 squares west and then
- 4 squares south.

Complete the route of the walker on the grid. [2]

6 These are the distances, in km, cycled by eleven cyclists in one week.

13 27 19 12 15 32 36 24 10 18 21

(a) Find the median.

..... km [2]

(b) Find the range.

..... km [1]

7 Work out.

1.2×0.3

..... [1]

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8 Work out.

$6 - 14 \div 2$

..... [1]

9 A map has a scale of 2 cm represents 5 km.

Write this scale as a ratio in its simplest form.

..... : ..... [2]

10 Simplify.

$4f - 3g - f - 2g$

..... [2]

11 Here is a ferry timetable.

Port A	05 00	10 05	15 35	20 00
Port B	06 55			21 55
Port C			18 20	23 10
Port D		13 10		
Port E	08 35	14 00	19 00	23 50

Work out the shortest time taken for the journey from port A to port E.

..... h ..... min [2]

12 Work out 15 as a percentage of 60.

.....% [1]

13 Expand.

$$x^2(3-x)$$

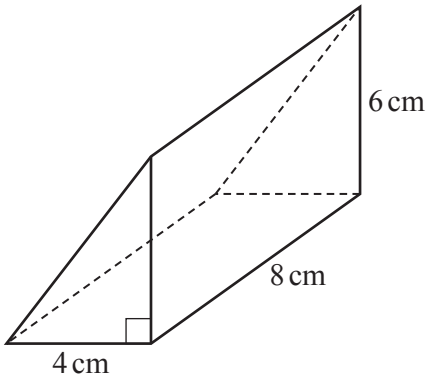
..... [2]

14 Factorise.

$$15q+35$$

..... [1]

15



NOT TO SCALE

Work out the volume of the triangular prism.

..... cm^3 [3]

16 The table shows the number of minutes taken by 28 students to solve a problem.

Number of minutes (m)	$0 < m \leqslant 1$	$1 < m \leqslant 2$	$2 < m \leqslant 3$	$3 < m \leqslant 4$	$4 < m \leqslant 5$	$5 < m \leqslant 6$
Number of students	1	5	6	10	4	2

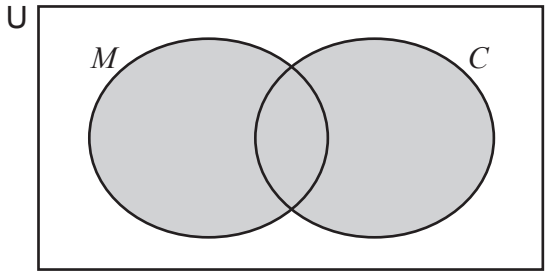
One of these students is chosen at random.

Find the probability that this student took 3 minutes or less to solve the problem.
Give your answer as a fraction in its simplest form.

..... [2]

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17 Use set notation to describe the shaded region.



..... [1]

18 Rearrange the formula to make x the subject.

$$y = \frac{x}{4} + 5$$

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

19 $\mathrm{U} = \{15, 16, 17, 18, 19, 20\}$
$P = \{\text{prime numbers}\}$

Write down the elements of P'.

..... [1]

20 Find an expression for the nth term of this sequence.

45 40 35 30 25

..... [2]

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

21 Jenna cycles at an average speed of 15 km/h.

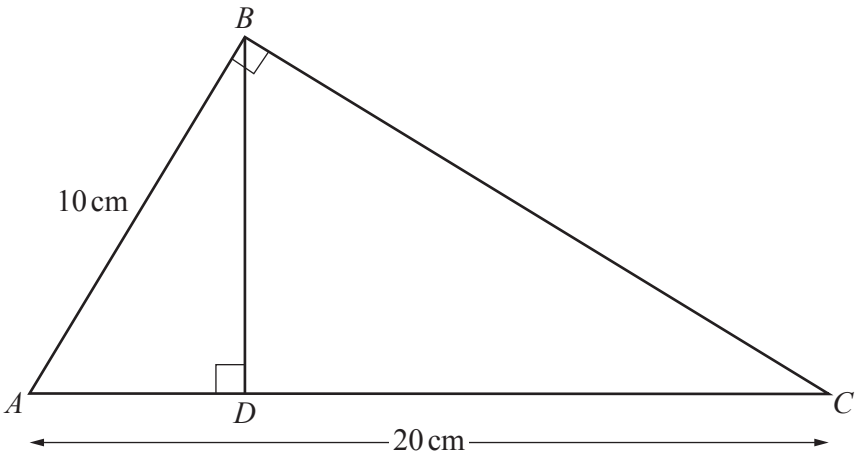
Find how many minutes she will take to cycle 10 km.

..... minutes [2]

22 Find the equation of the line parallel to $y = 5x + 1$ that passes through $(0, -2)$.

..... [2]

23



NOT TO SCALE

Triangle ABC is mathematically similar to triangle ADB.
$AC = 20$ cm and $AB = 10$ cm.

Work out AD.

$AD =$ ..... cm [2]

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