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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.

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 .

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

3

Answer **all** the questions.

1

2 3 12 40 60

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

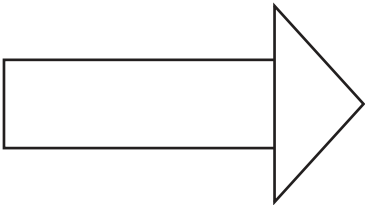
..... [1]

2 A bucket contains 9000 millilitres of water.

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

..... litres [1]

3

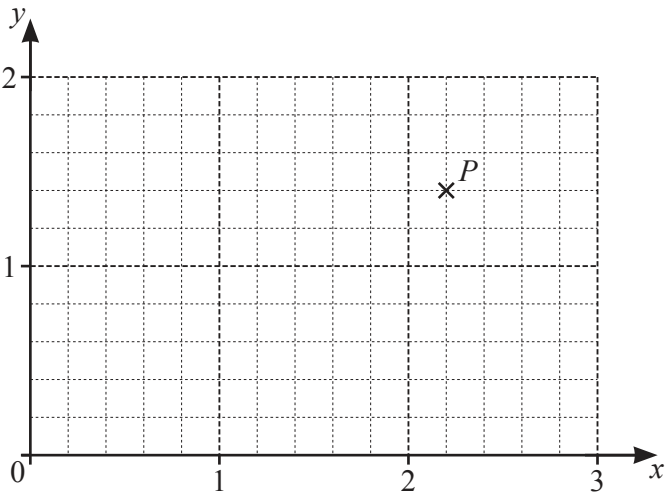


The diagram shows a shape made from a rectangle and a triangle.

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

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

4

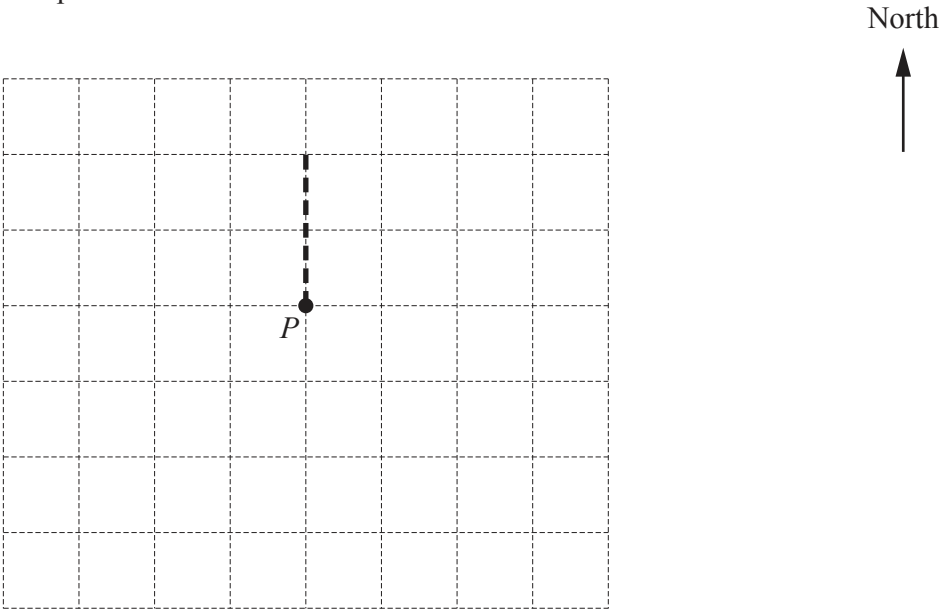


(a) Write down the coordinates of the point *P*.
(..... ,) [1]

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

4

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]

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.

$x^2(3 - x)$

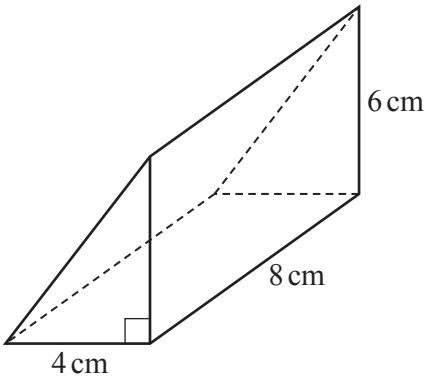
..... [2]

14 Factorise.

$15q + 35$

..... [1]

15



NOT TO
SCALE

Work out the volume of the triangular prism.

..... cm³ [3]

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

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

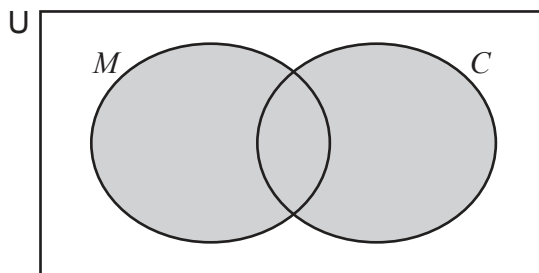
One of these students is chosen at random.

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]

7

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

Write down the elements of P' .

..... [1]

- 20 Find an expression for the n th 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.

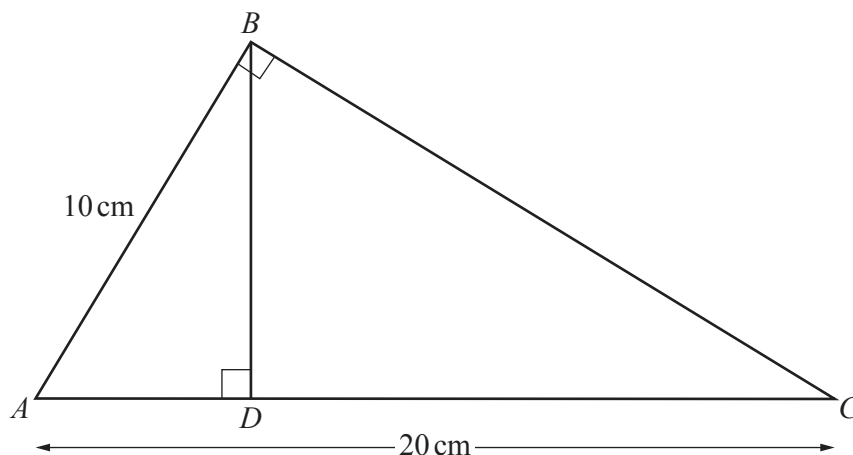
Find how many minutes she will take to cycle 10 km.

..... minutes [2]

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

..... [2]

23



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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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