

Cambridge IGCSE™

CANDIDATE
NAME

CENTRE
NUMBER

--	--	--	--	--

CANDIDATE
NUMBER

--	--	--	--

MATHEMATICS

0580/11

Paper 1 (Core)

May/June 2024

1 hour

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.
- You should use a calculator where appropriate.
- You may use tracing paper.
- You must show all necessary working clearly.
- Give non-exact numerical answers correct to 3 significant figures, or 1 decimal place for angles in degrees, unless a different level of accuracy is specified in the question.
- For π , use either your calculator value or 3.142.

INFORMATION

- The total mark for this paper is 56.
- The number of marks for each question or part question is shown in brackets [].

This document has **12** pages. Any blank pages are indicated.

- 1 (a) Write 0.8 as a fraction.

..... [1]

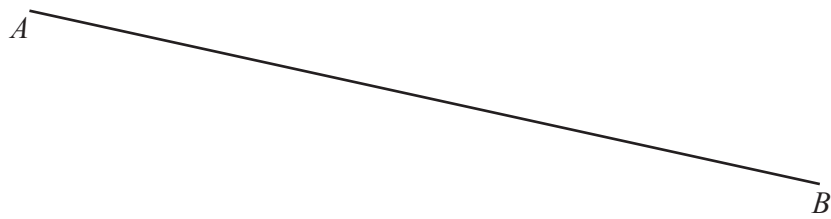
- (b) Write 28% as a decimal.

..... [1]

- (c) Write 4876 correct to the nearest hundred.

..... [1]

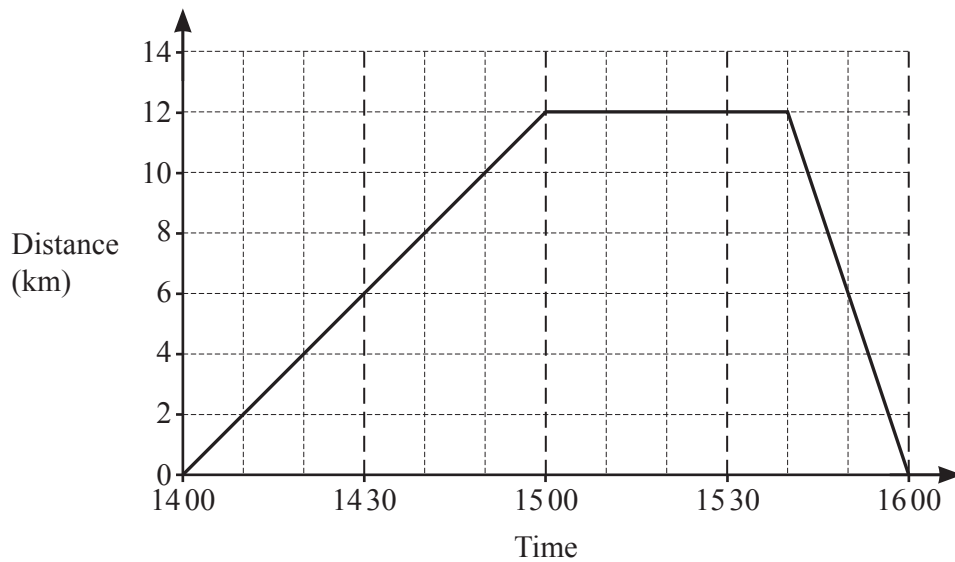
2



Measure the length of line AB in millimetres.

..... mm [1]

- 3 The travel graph shows the journey of a bus.



- (a) Find the distance the bus travels in the first 50 minutes.

..... km [1]

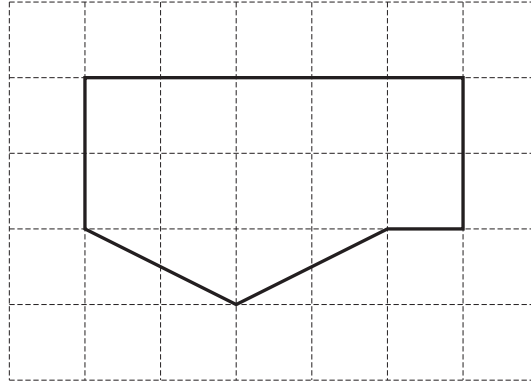
- (b) Find how long, in minutes, the bus is stationary.

..... min [1]

- 4 Write down the order of rotational symmetry of a rhombus.

..... [1]

- 5 The diagram shows a shape on a 1 cm^2 grid.



Find the area of this shape.

..... cm^2 [1]

- 6 (a) Work out.

$$28 - 16 \div 2$$

..... [1]

- (b) Find the reciprocal of $\frac{4}{5}$.

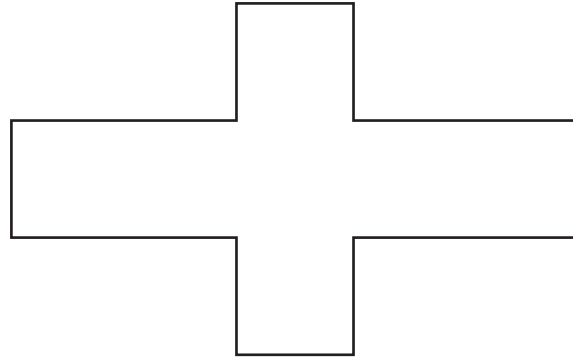
..... [1]

- 7 The temperature on Monday is -27°C .
The temperature on Tuesday is 15°C higher than on Monday.

Work out the temperature on Tuesday.

..... $^\circ\text{C}$ [1]

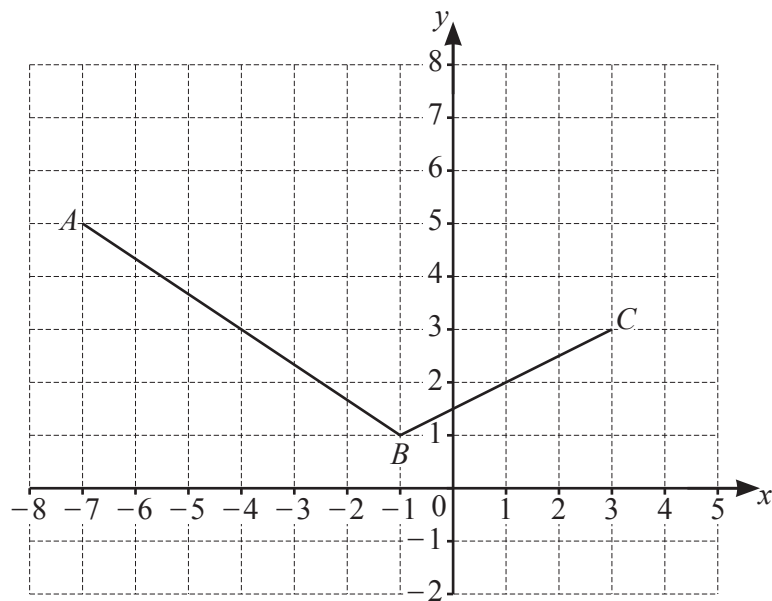
8



Draw all the lines of symmetry on this shape.

[2]

9

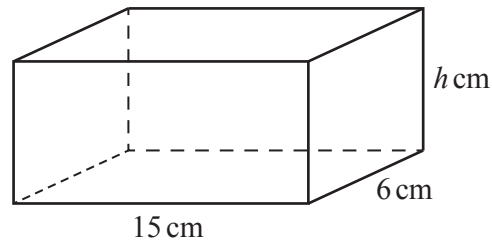


The diagram shows two sides of a parallelogram $ABCD$.

Find the coordinates of point D .

(..... ,) [2]

10

NOT TO
SCALE

The total surface area of this cuboid is 369 cm^2 .

Work out the value of h .

$h = \dots\dots\dots$ [4]

- 11 Geetha has a box of toys.
She picks a toy at random from the box.
The probability that she picks a wooden toy is 0.6 .

(a) Work out the probability that she does not pick a wooden toy.

$\dots\dots\dots$ [1]

(b) The box contains three types of toys, wooden, plastic or metal.

Type of toy	Wooden	Plastic	Metal
Number of toys		14	14
Probability	0.6		

Complete the table.

[2]

- 12 The table shows some information about two sequences.

	n th term	5th term
Sequence A	$60 - 4n$	
Sequence B	$n^2 - 300$	

Complete the table.

[2]

- 13 Find the coordinates of the point where the line $y = 3x - 5$ crosses the y -axis.

(..... ,) [1]

- 14 By writing each number in the calculation correct to 1 significant figure, find an estimate for the value of

$$\frac{28.2 - 5.6}{4.2 \times 1.68}.$$

You must show all your working.

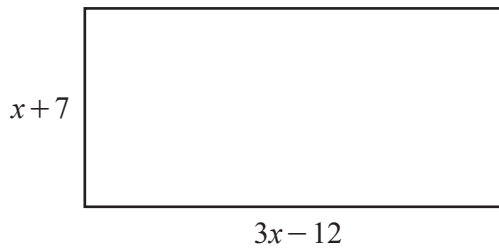
..... [2]

- 15 Factorise completely.

$$36x^2 + 40x$$

..... [2]

16

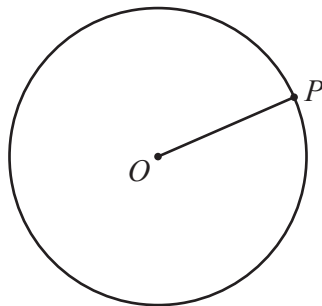
NOT TO
SCALE

The diagram shows a rectangle with length $3x - 12$ and width $x + 7$.

Find an expression for the perimeter of the rectangle.
Give your answer in its simplest form.

..... [3]

- 17 The diagram shows a circle, centre O .
 P lies on the circle.



- (a) Write down the mathematical name of the line OP .

..... [1]

- (b) Draw a tangent to the circle at P .

[1]

18 Find the greatest **odd** number that is a factor of 140 and a factor of 210.

..... [2]

19 Calculate.

(a) $\sqrt[3]{343} - \sqrt{40.96}$

..... [1]

(b) $(192 + 4 \times 16)^{1.25}$

..... [1]

20 (a) Find the value of 137^0 .

..... [1]

(b) $7^{12} \div 7^p = 7^{17}$

Find the value of p .

$p =$ [1]

21 Calculate $1.827 \times 10^6 \div 9000$.
Give your answer in standard form.

..... [2]

- 22 Solve the simultaneous equations.
You must show all your working.

$$\begin{aligned}6x + 2y &= 29 \\ 3x - 4y &= 17\end{aligned}$$

$$x = \dots\dots\dots$$

$$y = \dots\dots\dots [3]$$

- 23 Change 9.6 km/h into m/s.

$$\dots\dots\dots \text{ m/s } [2]$$

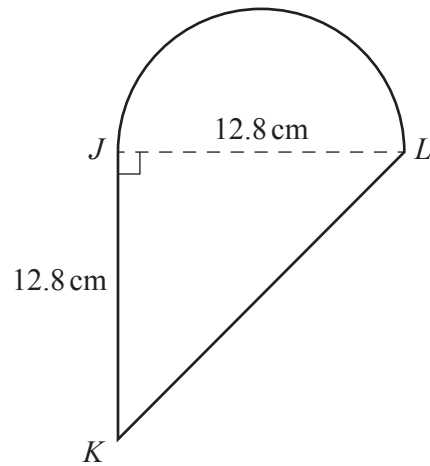
- 24 These are the first five terms of a sequence.

11 18 25 32 39

Find an expression for the n th term of the sequence.

$$\dots\dots\dots [2]$$

25



NOT TO
SCALE

The diagram shows a shape made from a triangle JKL and a semicircle with diameter JL . JKL is an isosceles right-angled triangle with $JK = JL = 12.8$ cm.

- (a) Calculate the area of this shape.

..... cm^2 [3]

- (b) Calculate the perimeter of this shape.

..... cm [4]

BLANK PAGE

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in the Cambridge Assessment International Education Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at www.cambridgeinternational.org after the live examination series.

Cambridge Assessment International Education is part of Cambridge Assessment. Cambridge Assessment is the brand name of the University of Cambridge Local Examinations Syndicate (UCLES), which is a department of the University of Cambridge.