



# Cambridge IGCSE™

CANDIDATE NAME



CENTRE NUMBER

--	--	--	--	--

CANDIDATE NUMBER

--	--	--	--



**CAMBRIDGE INTERNATIONAL MATHEMATICS**

**0607/13**

Paper 1 (Core)

**October/November 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  $r$ .

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







7 A box contains 25 centilitres of juice.

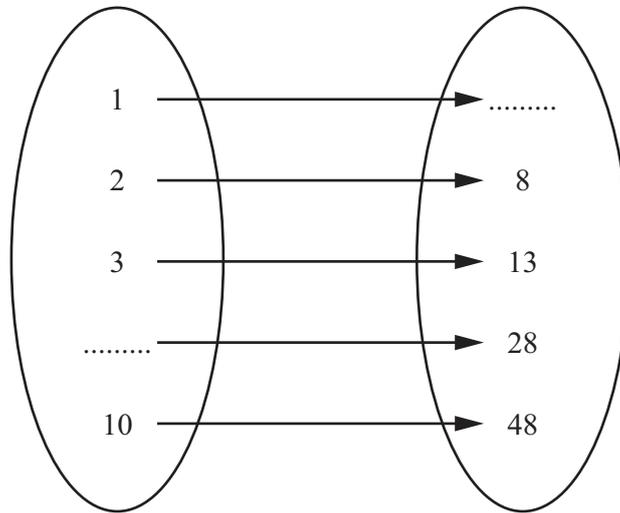
Work out the total amount of juice in 10 boxes.  
Give your answer in litres.

..... litres [2]

8 Write 85% as a fraction in its simplest form.

..... [2]

9 Complete the mapping diagram.



[2]

10 Sofia records the number of photos she takes each day during her two-week holiday.

18    17    9    12    25    8    21  
 20    22    9    13    17    9    10

Complete the stem-and-leaf diagram to show this information.

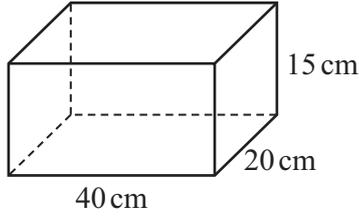
0	
1	
2	

Key ..... | ..... represents ..... photos [3]





11



NOT TO SCALE

Work out the total surface area of the cuboid.

..... cm<sup>2</sup> [3]

- 12 Zara asks 20 people how many times they buy fuel for their car during a two-week period. The table shows this information.

Number of times	1	2	3	4
Frequency	4	5	8	3

- (a) Find the mode.

..... [1]

- (b) Find the mean.

..... [2]

- 13 Write down all the integer values of  $x$  that satisfy this inequality.

$$-1 \leq x < 2$$

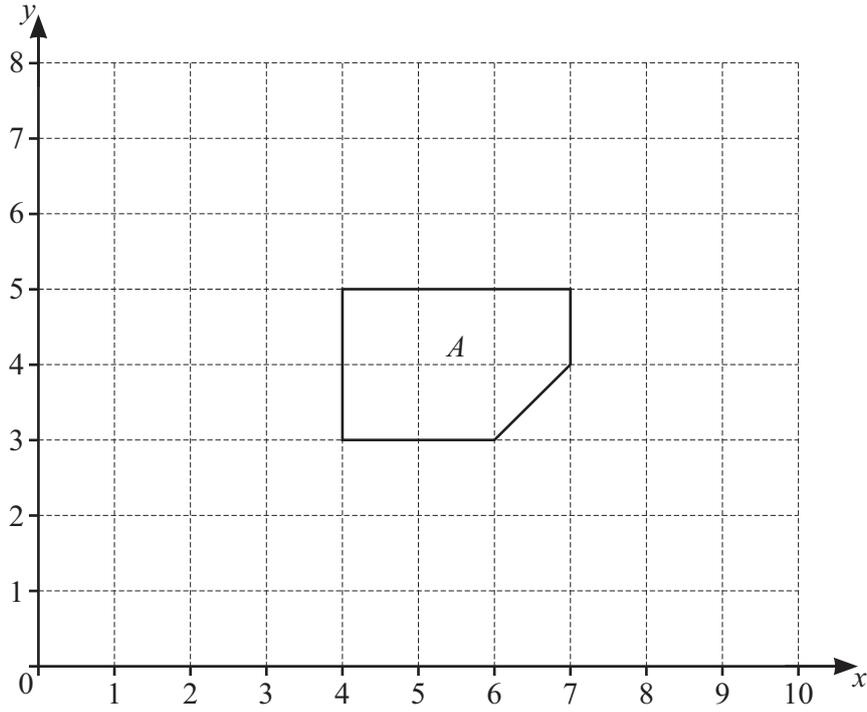
..... [2]



DO NOT WRITE IN THIS MARGIN



14



Translate shape *A* by  $\begin{pmatrix} -3 \\ -2 \end{pmatrix}$ .

[2]

15 Pia cycles from *Q* on a bearing of  $260^\circ$ .

Draw a line to show the direction of Pia's route.



[1]





- 16  $U = \{\text{numbers from 0 to 22}\}$   
 $A = \{\text{multiples of 4}\}$   
 $B = \{\text{square numbers}\}$

(a) Write down the elements of  $A$ .

..... [1]

(b) Write down the elements of  $A \cap B$ .

..... [1]

17 Simplify.

$$t^6 \div t^3$$

..... [1]

18 The  $n$ th term of a sequence is  $3n + k$ , where  $k$  is a positive integer.  
 The 10th term is 38.

(a) Find the value of  $k$ .

$k =$  ..... [2]

(b) Find the 5th term of the sequence.

..... [1]

19 Work out.

$$2\frac{2}{11} - 1\frac{3}{5}$$

..... [3]

Questions 20 and 21 are printed on the next page.



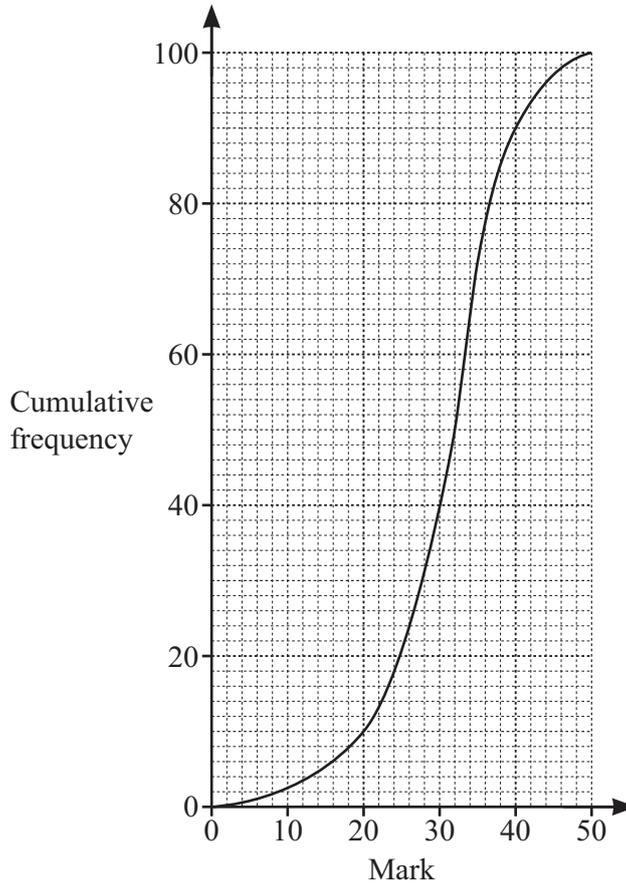
DO NOT WRITE IN THIS MARGIN



20 Find the gradient of the line  $5y = 3x + 20$ .

..... [1]

21 100 students take a biology test.  
The cumulative frequency curve shows the results.



(a) Use the curve to estimate the median mark.

..... [1]

(b) Find how many students gained more than 35 marks.

..... [2]

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](http://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.



DO NOT WRITE IN THIS MARGIN