Cambridge Assessment International Education

Cambridge IGCSE™

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

5872145267

CAMBRIDGE INTERNATIONAL MATHEMATICS **0607/12**

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.

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

Answer **all** the questions.

1 4 10 15 40 60

From the list of numbers, write down all the factors of 20.

..... [1]

2 Complete the statement with the correct mathematical name.

In a circle, ... = 2 × radius. [1]

3 Write the number eighty million in figures.

..... [1]

4 This formula is used to find the cost to make a number of chairs.

cost in dollars = 5 × number of chairs + 30

Work out the cost to make 10 chairs.

$ ..... [2]

5 The cost of one ticket for a show is $7.50 .

Work out the cost of 50 tickets.

$ ..... [1]

6 Faris is collecting data about cars.

Write down an example of continuous data that Faris could collect.

..... [1]

7 A box contains 25 centilitres of juice.

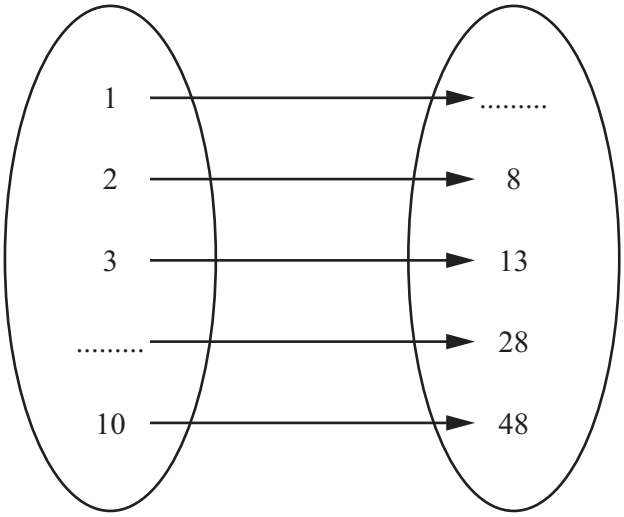
Work out the total amount of juice in 10 boxes.
Give your answer in litres.

..... 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.

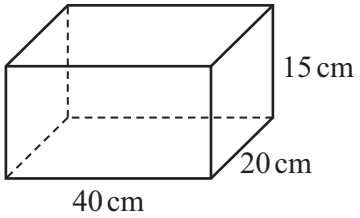
18	17	9	12	25	8	21
20	22	9	13	17	9	10

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^2 [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.

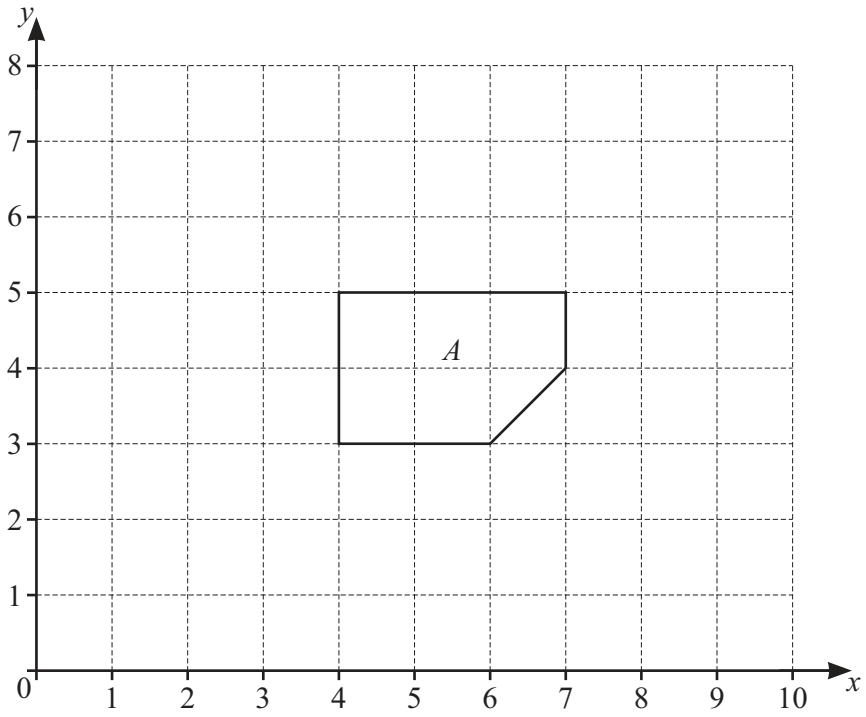
..... [2]

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

$$-1 \leqslant x < 2$$

..... [2]

14



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

15 Pia cycles from Q on a bearing of 260°.

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

[1]

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

(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 nth 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.

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

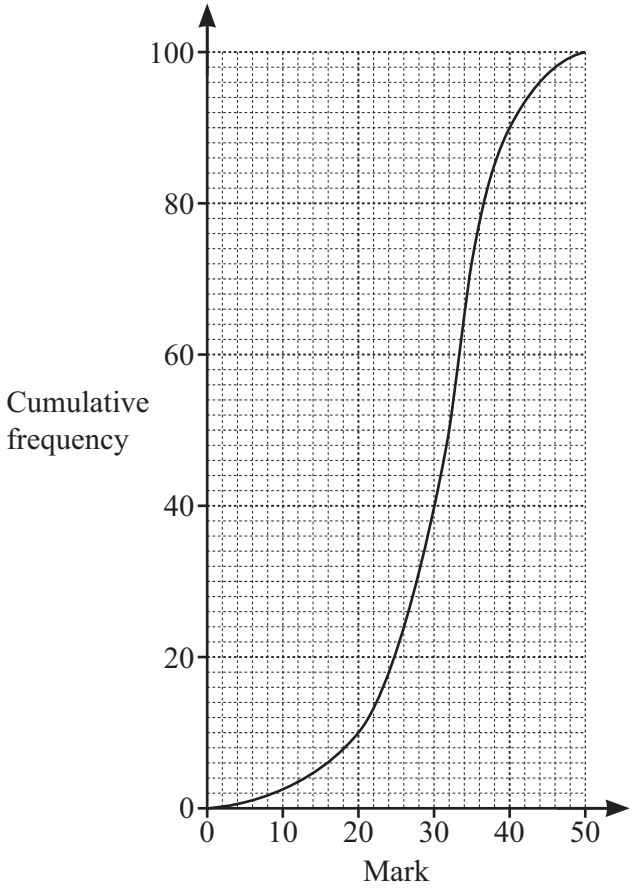
..... [3]

Questions 20 and 21 are printed on the next page.

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]