Cambridge Assessment International Education

Cambridge IGCSE™

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER				

4295231161

CAMBRIDGE INTERNATIONAL MATHEMATICS **0607/11**

Paper 1 (Core) **May/June 2023**

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.

© UCLES 2023

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

© UCLES 2023

Answer **all** the questions.

1 Write the number 91 072 in words.

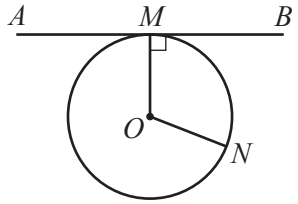
..... [1]

2 Write down the next term of this sequence.

11, 14, 17, 20, …

..... [1]

3 The diagram shows a circle, centre *O*.



an obtuse	a chord	a diameter	an acute
parallel	a right	perpendicular	a radius

Complete each statement using words from the list.

Angle *OMB* is ..... angle.

Line *ON* is ..... . [2]

4 7 13 25 29 33 47

From the list of numbers, write down

(a) the multiple of 3

..... [1]

(b) the factor of 52.

..... [1]

5 Write 520.8647 correct to 1 decimal place.

..... [1]

6 Work out how many hours there are in 5 days.

..... [1]

7

Village	Temperature (°C)		
	Maximum	Minimum	Difference
Smidge	31	18	13
Midtown	26		10
Bigwall	28	19	

The table shows the maximum and minimum temperatures in three villages.

(a) Write down the village with the lowest maximum temperature.

..... [1]

(b) Complete the table. [2]

8 Eight cards are numbered from 1 to 8.
One of these cards is picked at random.

Write down the probability the card numbered 3 is picked.

..... [1]

9 A piece of wood is 2 m long.
It is cut into blocks that are each 60 mm long.

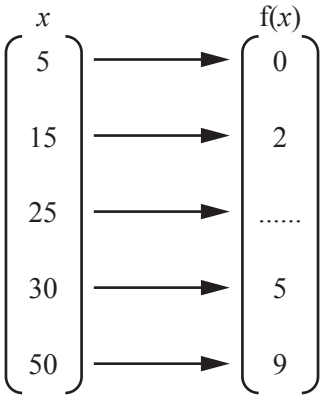
Work out the number of these blocks that are cut and the length of wood left over.

Number of blocks .....

Length of wood ..... mm [2]

© UCLES 2023

10 Complete the mapping diagram.



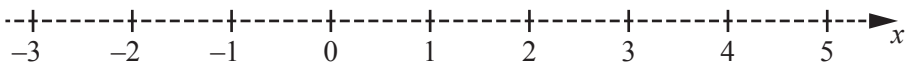
[1]

11 A snail moves at an average speed of 50 centimetres per minute.

Work out how many minutes the snail takes to move 3 metres.

..... min [2]

12 Show the inequality $-1 < x \leqslant 4$ on the number line.



[2]

13 In a mathematics examination, $\frac{3}{8}$ of the questions test algebra.
There are 6 algebra questions.

Work out the total number of questions in the examination.

..... [2]

14 $A = \{2, 9, 11, 14, 20\}$

$B \subset A$ and $\mathrm{n}(B) = 2$.

List the elements of one possible set B.

..... [1]

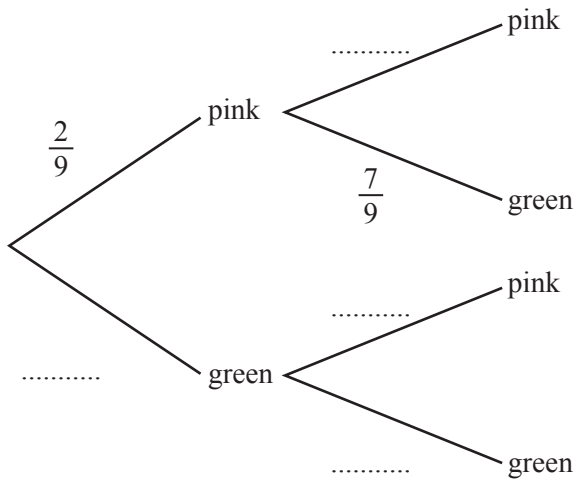
15 C is the point (1, 8) and D is the point (5, 0).

Find the coordinates of the mid-point of CD.

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

16 A bag contains 2 pink balls and 7 green balls.
One ball is taken at random and then put back in the bag.
Another ball is then taken at random from the bag.

Complete the tree diagram.



[2]

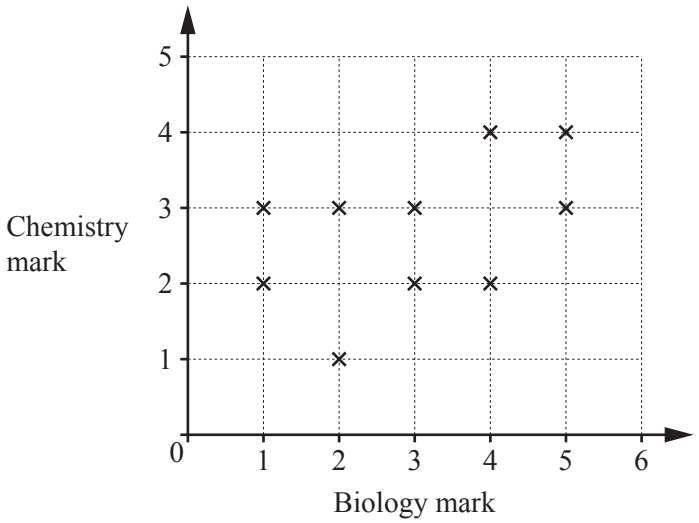
17 Simplify.

$$\frac{c}{5} \div \frac{1}{d}$$

..... [1]

© UCLES 2023

18 The scatter diagram shows the biology mark and the chemistry mark for each of 10 students.



(a) On the scatter diagram, draw a line of best fit. [1]

(b) Find the number of students with a mark of more than 3 in biology.

..... [1]

19 The cost of 30 litres of fuel is $27.

Work out the cost of 40 litres of fuel.

$ ..... [2]

20 A sphere has diameter 6 mm.

Calculate the volume of the sphere.
Give your answer in terms of π.

..... mm^3 [3]

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

21 Solve the simultaneous equations.

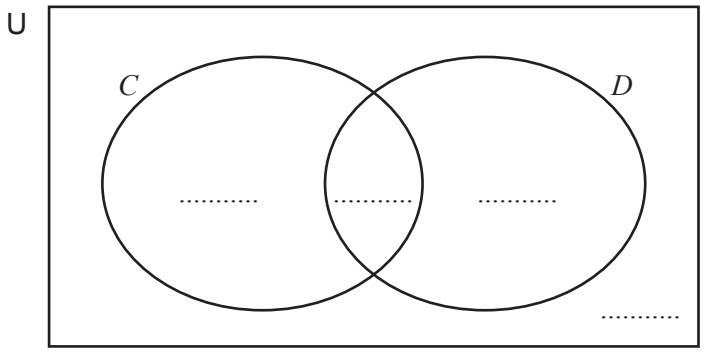
$$2x + 3y = 17$$
$$x - y = -4$$

$x =$ .....

$y =$ ..... [3]

22 Yasmin asks 60 students whether they like cherries (C) or dragon fruit (D).
13 students like both cherries and dragon fruit.
18 students like cherries only.
15 students like neither.

Complete the Venn diagram to show this information.



[2]

23 The equation of line L is $2y = x - 6$.
Line P is parallel to line L and passes through the point (0, 4).

Find the equation of line P.

..... [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 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.

© UCLES 2023