Cambridge Assessment International Education

Cambridge IGCSE™

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER				

4299764414

CAMBRIDGE INTERNATIONAL MATHEMATICS **0607/11**

Paper 1 (Core) **October/November 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.

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 Work out how many days there are in 3 weeks.

..... [1]

2 Complete the statement.

For any circle the diameter is ..... × the radius. [1]

3 Write down the value of $\sqrt{81}$.

..... [1]

4 The table shows information about 230 goats.

	Adult goats	Kid goats
Male	27	96
Female	23	84

Work out the total number of kid goats.

..... [1]

5 A 5-litre container of orange juice is used to fill cups that each hold 200 millilitres.

Work out the maximum number of cups that can be filled.

..... [2]

6 Draw an angle of 57° at A.

A

[1]

7 Complete the sequence of the first six triangle numbers.

1, 3, ..., 10, ..., 21

[2]

8 Write these numbers in order of size, starting with the smallest.

$\frac{3}{4}$ 83% 0.8 0.72

..... < ..... < ..... < ..... [2]

smallest

9 E is the point (3, 7) and F is the point (3, 11).

Find the coordinates of the mid-point of EF.

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

10 Simplify.

$-8k+4d-3d-6k$

..... [2]

11 Work out 3 hours as a percentage of 15 hours.

.....% [2]

12 $f(x) = x^2 - 2$

Work out f(6) .

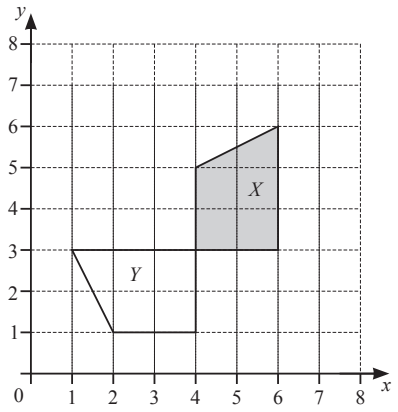
..... [1]

13 Simplify.

$$\frac{2m}{5} \times 3$$

..... [1]

14



Describe fully the **single** transformation that maps shape *X* onto shape *Y*.

.....

..... [3]

15 Multiply out.

$$2(5 + 2y)$$

..... [1]

16 A semicircle has diameter 6 m.

Find the arc length of this semicircle.
Give your answer in terms of π .

..... m [2]

17 The angles in any triangle add up to 180°.
The angles in triangle T are in the ratio 3 : 4 : 5.

Work out the size of each angle in triangle T.

..... , ... , ... [3]

18 Solve the simultaneous equations.

$$x = -2y$$
$$3x - 2y = 16$$

$x =$ .....

$y =$ ..... [2]

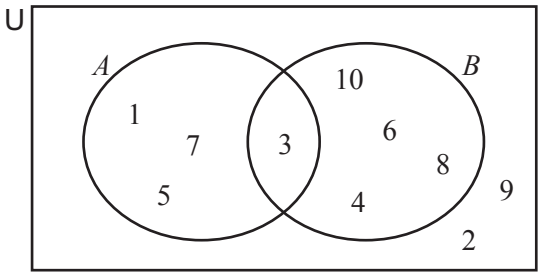
19 Work out.

$$(3 \times 10^4) \times (4 \times 10^2)$$

Give your answer in standard form.

..... [2]

20



The Venn diagram shows two sets, A and B.

(a) Write down the elements of set A.

..... [1]

(b) One of the numbers is selected at random.

Find the probability that this number is in both set A and set B.

..... [1]

21 Write down the equation of the line with gradient 1 that passes through (0, 5).

..... [2]

Questions 22 and 23 are printed on the next page.

22 The grouped frequency table shows information about the number of hours worked by each of 80 doctors.

Number of hours (t)	Frequency
$10 < t \leqslant 20$	8
$20 < t \leqslant 30$	16
$30 < t \leqslant 40$	21
$40 < t \leqslant 50$	35

(a) Write down the class interval containing the median.

..... $< t \leqslant$ ..... [1]

(b) Complete the cumulative frequency table.

Number of hours (t)	Cumulative frequency
$t \leqslant 20$	8
$t \leqslant 30$	
$t \leqslant 40$	
$t \leqslant 50$	

[2]

23 These are the first five terms in a sequence.

225 223 221 219 217

Find the nth term.

..... [2]