Cambridge IGCSE™

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

CAMBRIDGE INTERNATIONAL MATHEMATICS **0607/11**

Paper 1 (Core) **October/November 2022**

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. $\qquad$ $A = \frac{1}{2}bh$

Area, A, of circle, radius r. $\qquad$ $A = \pi r^2$

Circumference, C, of circle, radius r. $\qquad$ $C = 2\pi r$

Curved surface area, A, of cylinder of radius r, height h. $\qquad$ $A = 2\pi rh$

Curved surface area, A, of cone of radius r, sloping edge l. $\qquad$ $A = \pi rl$

Curved surface area, A, of sphere of radius r. $\qquad$ $A = 4\pi r^2$

Volume, V, of prism, cross-sectional area A, length l. $\qquad$ $V = Al$

Volume, V, of pyramid, base area A, height h. $\qquad$ $V = \frac{1}{3}Ah$

Volume, V, of cylinder of radius r, height h. $\qquad$ $V = \pi r^2 h$

Volume, V, of cone of radius r, height h. $\qquad$ $V = \frac{1}{3}\pi r^2 h$

Volume, V, of sphere of radius r. $\qquad$ $V = \frac{4}{3}\pi r^3$

Answer **all** the questions.

1 Work out how many days there are in 12 weeks.

.... days [1]

2 Write 6847 correct to the nearest hundred.

.... [1]

3
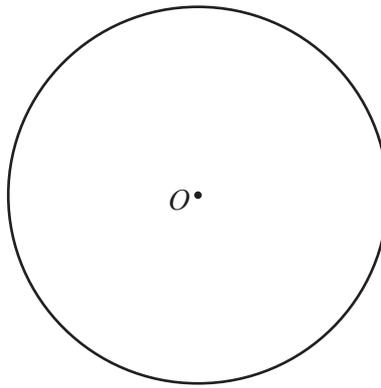
On the circle, centre *O*, draw a radius. [1]

4 Find 10% of 950.

.... [1]

5 Draw Pattern 2 in this sequence.

Pattern 1   **Pattern 2**   **Pattern 3**   **Pattern 4**

[1]

                                       [Turn over

4

6 Complete the mapping diagram.

x f(x)

$$\begin{pmatrix} 4 \\ 5 \\ 6 \\ 7 \\ 8 \end{pmatrix} \rightarrow \begin{pmatrix} \ldots \\ 13 \\ 16 \\ 19 \\ 22 \end{pmatrix}$$
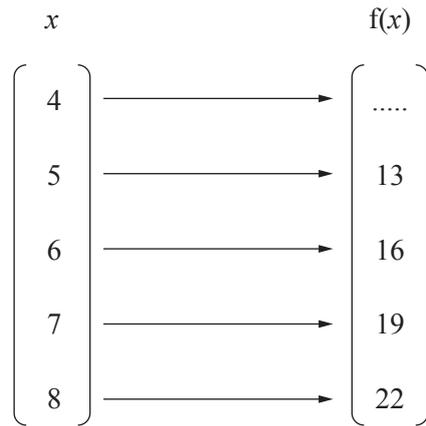
[1]

7 Simplify.

$$12f - 2f + 4f$$

.... [1]

8 In a class of 42 students, $\frac{2}{7}$ are girls.

Work out the number of boys in the class.

.... [2]

9 Write down the integer that is nearest to $\sqrt{39}$.

.... [1]

10 Work out.

$$(10 - 15) \times -4$$

.... [1]

11 The marks for 19 students in a test are recorded below.

72	84	75	100	87	95	81	72	90	89
98	87	74	100	79	85	91	76	93	

(a) Complete an ordered stem-and-leaf diagram.

7	
8	
9	
10	

Key .... | .... represents ....

[3]

(b) How many students scored less than 84?

.... [1]

(c) Write down the median.

.... [1]

12 $h(x) = \dfrac{5x - 1}{2}$

Work out $h(2)$.

.... [1]

13 Work out.

$$\frac{2}{5} + \frac{9}{20}$$

.... [2]

14 Simplify.

$$y \div y$$

.... [1]
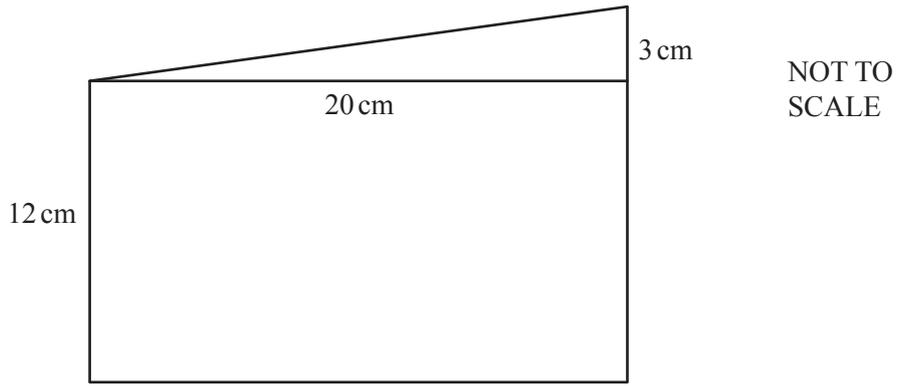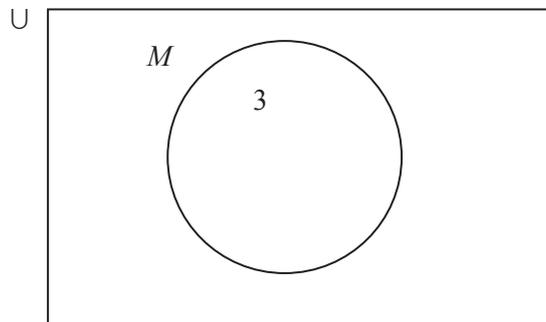
15

The diagram shows a triangle of base 20 cm and height 3 cm attached to a rectangle with sides of length 20 cm and 12 cm.

Find the total area of the shape.

.... cm^2 [2]

16 $\cup = \{3, 4, 5, 6, 7, 8, 9, 10, 11, 12\}$
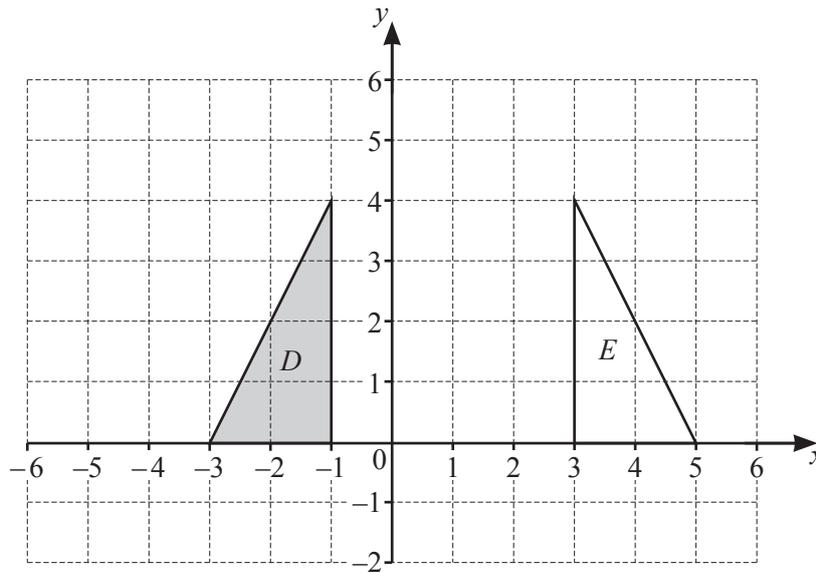$M = \{\text{multiples of 3}\}$

(a) Complete the Venn diagram.

[1]

(b) Write down n(M).

.... [1]

17 Find the equation of the line parallel to the line $y = 2x + 5$ that passes through the point $(0, -3)$.

$y =$ .... [2]

18

Describe fully the **single** transformation that maps triangle *D* onto triangle *E*.

....

.... [2]

19 A fair 6-sided die is numbered 1, 2, 3, 4, 5 and 6.
The die is thrown twice.

Find the probability that the die lands on 4 both times.

.... [2]

20 Find the highest common factor (HCF) of 26 and 78.

.... [1]

21 Solve.

$$5x + 7 \geqslant -3$$

.... [2]

Questions 22, 23 and 24 are printed on the next page.

8

22 These are the first five terms in a sequence.

$$-2 \quad 2 \quad 6 \quad 10 \quad 14$$

Find the nth term.

.... [2]

23 Idris runs at an average speed of 5 m/s.

Find how long he takes to run 3 km.

.... seconds [3]

24 Solve the simultaneous equations.

$$x - 2y = 4$$
$$x + 3y = -1$$

$x =$ ....

$y =$ .... [2]