Cambridge Assessment International Education

# Cambridge IGCSE™

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|---|---|---|---|---|---|---|---|---|---|
| CANDIDATE NAME | | | | | | | | | |
| CENTRE NUMBER | | | | | | CANDIDATE NUMBER | | | | |

*9819439892*

**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 $h$. | $A = \frac{1}{2}bh$ |
| 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 $r$. | $V = \frac{4}{3}\pi r^3$ |

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Answer **all** the questions.

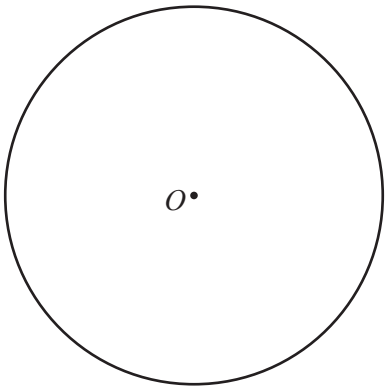
**1** Work out how many days there are in 12 weeks.

..... days [1]

**2** Write 6847 correct to the nearest hundred.

..... [1]

**3**

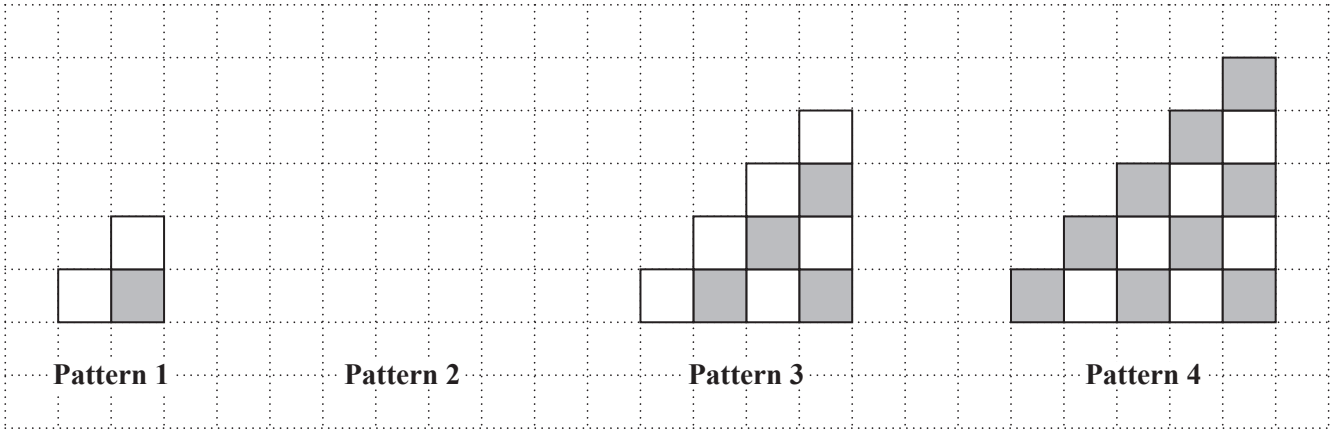



On the circle, centre $O$, draw a radius. [1]

**4** Find 10% of 950.

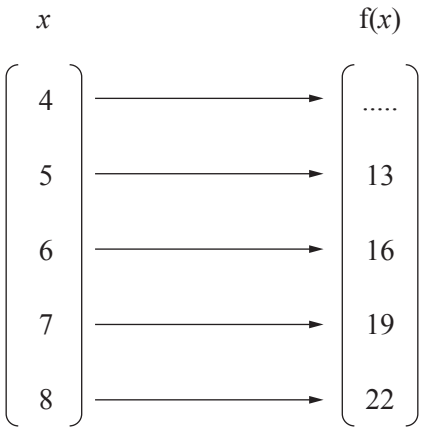
..... [1]

**5** Draw Pattern 2 in this sequence.




[1]

**6** Complete the mapping diagram.




[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]

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**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.

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

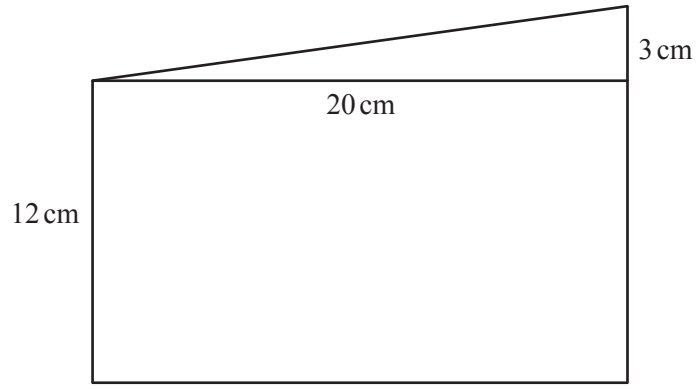
..... [2]

**14** Simplify.

$$y \div y$$

..... [1]

**15**




NOT TO SCALE

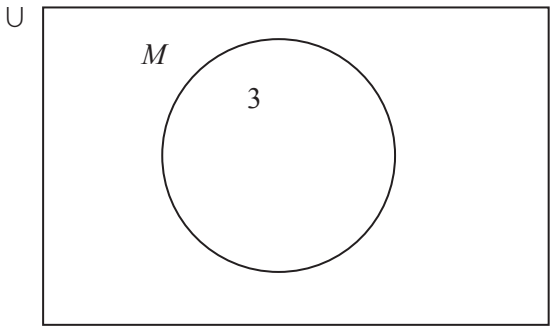
The diagram shows a triangle of base 20 cm and height 3 cm attached to a rectangle with sides of length 20 cm and 12 cm.

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($M$).

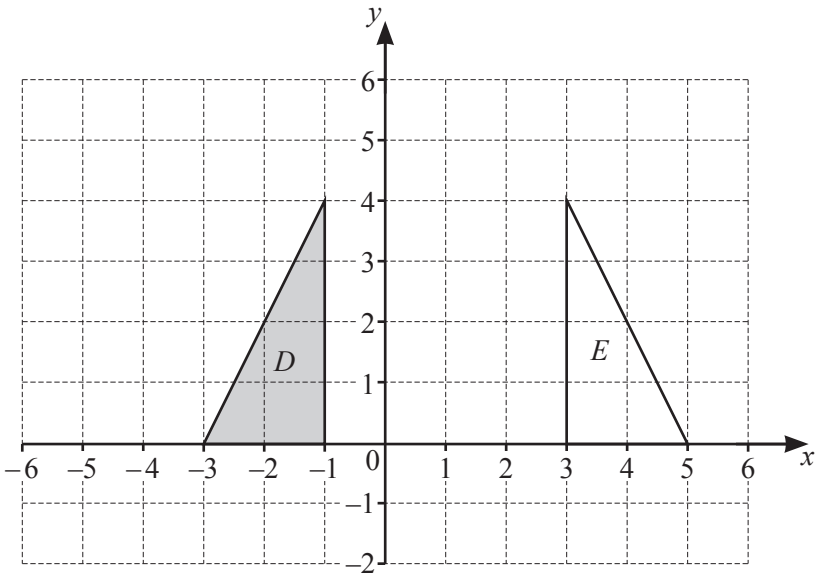
..... [1]

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

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

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**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.**

**22** These are the first five terms in a sequence.

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

Find the $n$th 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]

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