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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.

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.

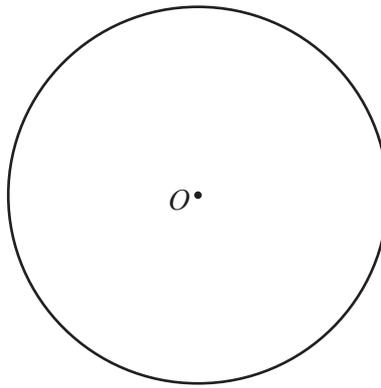
1 Work out how many days there are in 12 weeks.

..... 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.

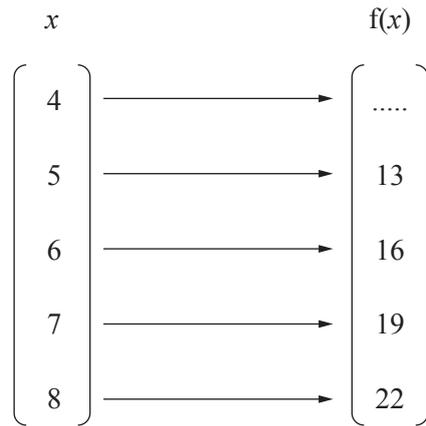
..... [1]

5 Draw Pattern 2 in this sequence.

Pattern 1	Pattern 2	Pattern 3	Pattern 4

[1]

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]

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

Work out $h(2)$.

..... [1]

13 Work out.

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

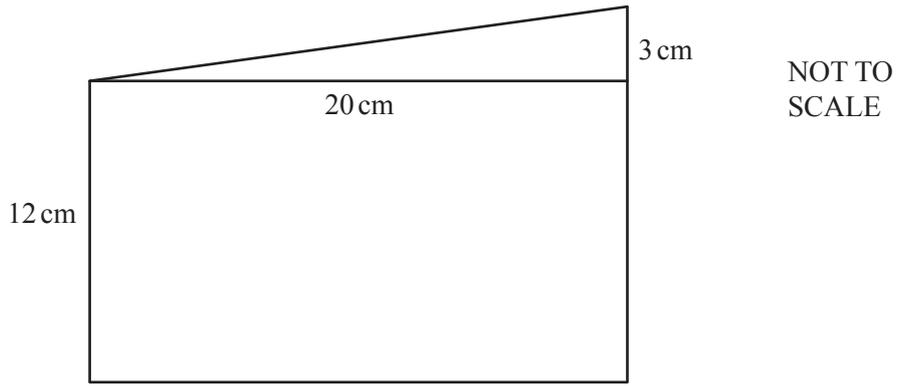
..... [2]

14 Simplify.

$$y \div y$$

..... [1]

15



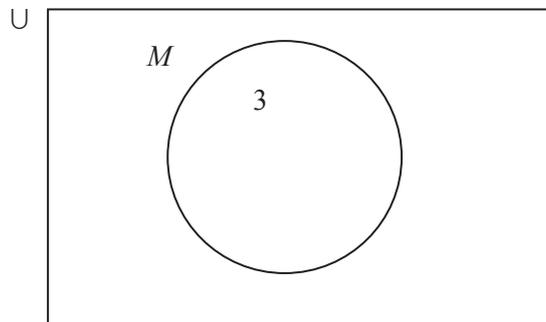
The diagram shows a triangle of base 20 cm and height 3 cm attached to a rectangle with sides of length 20 cm and 12 cm.

Find the total area of the shape.

..... cm² [2]

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

(a) Complete the Venn diagram.



[1]

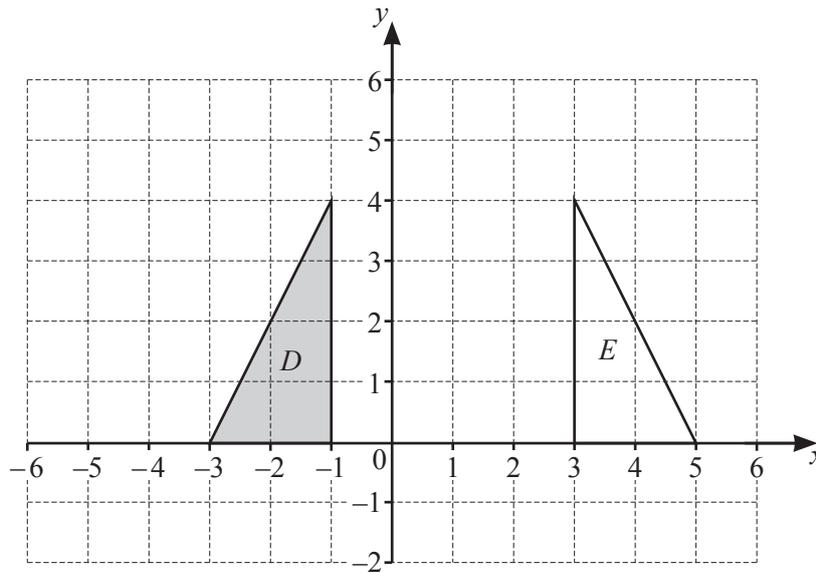
(b) Write down $n(M)$.

..... [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.

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

..... [2]

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

22 These are the first five terms in a sequence.

−2 2 6 10 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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