



Cambridge IGCSE™

CANDIDATE
NAME
CENTRE
NUMBER

--	--	--	--	--

CANDIDATE
NUMBER

--	--	--	--



CAMBRIDGE INTERNATIONAL MATHEMATICS

0607/12

Paper 1 (Core)

October/November 2021

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 .

$$V = \frac{1}{3}\pi r^2 h$$

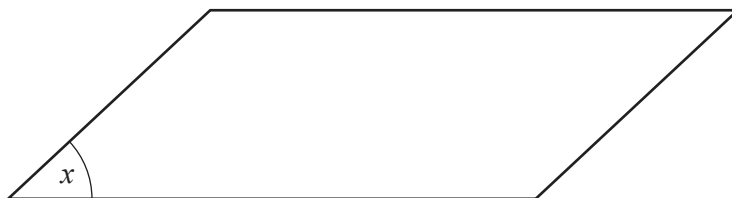
Volume, V , of sphere of radius r .

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

3Answer **all** the questions.

- 1** Write 3468 correct to the nearest ten.

..... [1]

2

Complete the statement.

Angle x is an angle. [1]

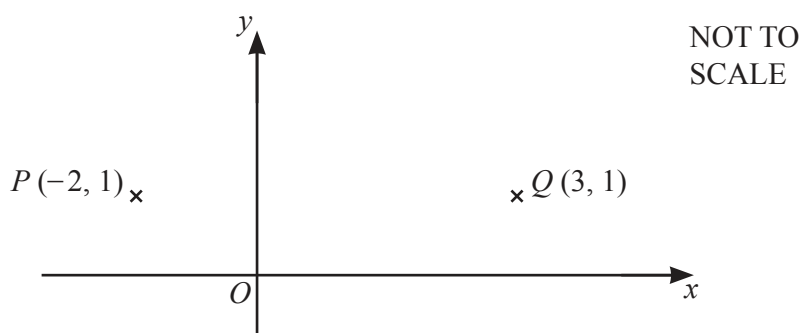
- 3** Write $\frac{59}{100}$ as a percentage.

..... % [1]

- 4** Work out.

$$2 \times (9 - 2 \times 3) - 5$$

..... [2]

5Work out the distance PQ .

..... [1]

- 6** Find the cube root of 64.

..... [1]

4

- 7 Mario invests \$400 for 2 years at a rate of 5% per year simple interest.

Work out the interest that Mario receives.

\$ [2]

- 8 Find the total surface area of a cube of side 3 cm.

..... cm^2 [2]

- 9 Find the distance a train travels in 2 hours when its average speed is 120 km/h.

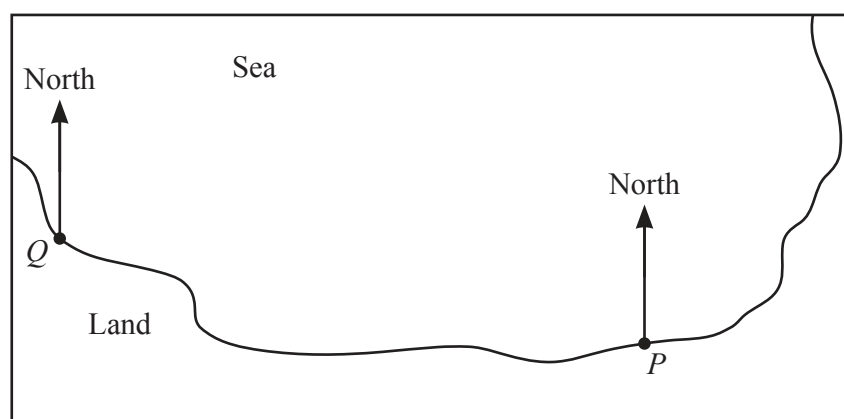
..... km [1]

- 10 An apartment costs \$500 per month to rent.

Calculate the cost to rent the apartment for 1 year 3 months.

\$ [2]

11



Measure the bearing of town Q from town P .

..... [1]

5

12



Point X is translated to point Y .

Write down the vector for this translation.

$\begin{pmatrix} \\ \end{pmatrix}$ [1]

13 Simplify.

$$v^3 \div v$$

..... [1]

14 Write down a number, greater than 1, that is both a square number and a triangle number.

..... [1]

15 Microchips are checked for defects.
Out of 10 000 microchips made on a particular machine, 500 were found to be defective.

Find the probability that a microchip from this machine is defective.
Give your answer as a decimal.

..... [2]

16 $f(x) = \frac{x}{5}$

Work out the value of x when $f(x) = 10$.

$x =$ [1]

6**17** Solve the equation.

$$2(x+3) = 20$$

 $x =$ [2]
18
 $\frac{4}{5}$ 0.9 $\frac{20}{7}$ 3 π 5.7

From the list of numbers write down

(a) the integer,

..... [1]

(b) the irrational number.

..... [1]

19 The table shows the number of televisions in each of 20 homes.

Number of televisions	0	1	2	3	4
Frequency	2	8	7	2	1

(a) Write down the mode.

..... [1]

(b) Find the mean.

..... [3]

20 Find the lowest common multiple (LCM) of 24 and 60.

..... [2]

..... [2]

- Complete the tree diagram.

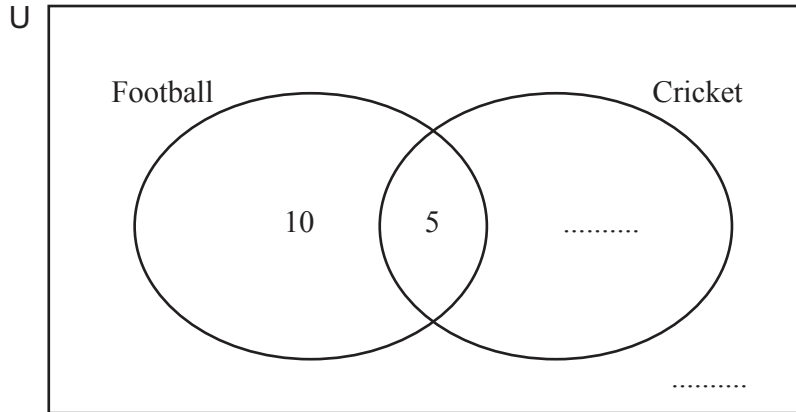


[Turn over

8

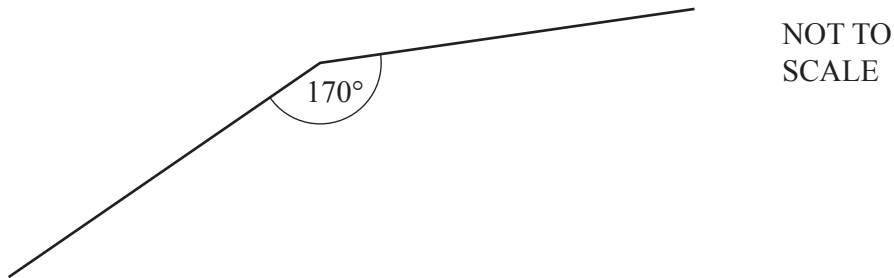
- 23** A class has 30 students.
 5 students play both football and cricket.
 15 students play football and 13 students play cricket.

Use this information to complete the Venn diagram.



[2]

24



The diagram shows one interior angle of a regular polygon.

Find the number of sides of the polygon.

..... [3]

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 the Cambridge Assessment Group. Cambridge Assessment is the brand name of the University of Cambridge Local Examinations Syndicate (UCLES), which itself is a department of the University of Cambridge.