



Cambridge IGCSE™

CANDIDATE
NAME

CENTRE
NUMBER

--	--	--	--	--

CANDIDATE
NUMBER

--	--	--	--

CAMBRIDGE INTERNATIONAL MATHEMATICS

0607/13

Paper 1 (Core)

May/June 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 . $V = \frac{1}{3}\pi r^2 h$

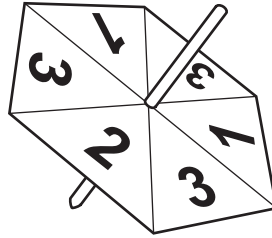
Volume, V , of sphere of radius r . $V = \frac{4}{3}\pi r^3$

Answer **all** the questions.

- 1 Write $\frac{1}{4}$ as a percentage.

.....% [1]

2



The diagram shows a fair 6-sided spinner which can land on the numbers 1, 2 or 3.

Write down the number on which the spinner is least likely to land.

..... [1]

- 3 Change 4 centilitres into millilitres.

..... ml [1]

- 4 Write 26 830 correct to the nearest hundred.

..... [1]

- 5 Canoe hire costs \$30 per day.
A canoe is hired for 7 days.

Work out the total cost.

\$ [1]

- 6 The table shows some data collected in a probability experiment.

Put a tick (✓) in each row to show whether the data is discrete or continuous.

Data	Discrete	Continuous
Score on die		
Number of rolls of die		
Time taken to roll die		

[1]

7 A is the point $(3, 2)$ and B is the point $(3, 8)$.

Work out the length of AB .

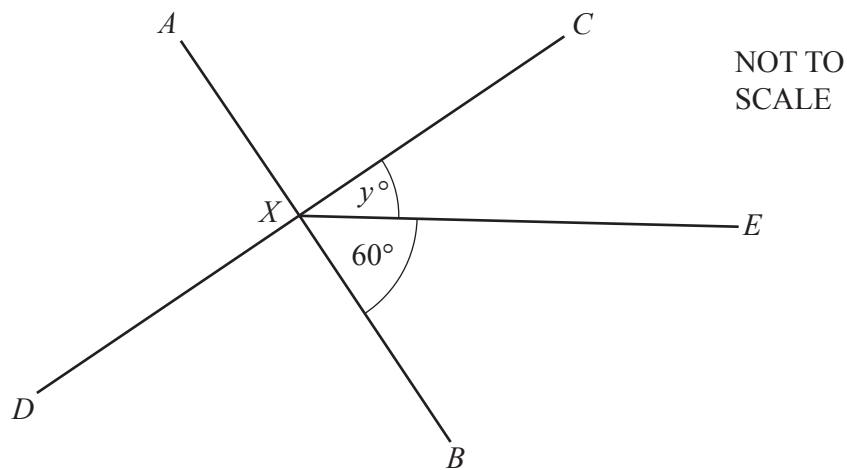
..... units [1]

8 Fill in the two missing terms of the sequence.

$-4, \square, 2, 5, 8, \square, \dots$

[2]

9



Lines AB and CD are straight lines that intersect at right angles at X .

Find the value of y .

$y = \dots\dots\dots$ [2]

10 Simplify.

$$3a + 4b + 2b - a$$

..... [2]

- 11 A cuboid has a volume of 300 cm^3 .
The length of the cuboid is 25 cm and the width is 4 cm.

Find its height.

..... cm [2]

- 12 Insert two pairs of brackets to make this statement correct.

$$3 + 2 \times 5 = 5 \times 4 + 6 \div 2 = 25$$

[2]

- 13 In a sale a shop reduces its prices by 10%.
Paula buys a coat which had an original price of \$50.

Work out how much Paula pays for the coat.

\$ [2]

- 14 Work out the size of one exterior angle of a 12-sided regular polygon.

..... [2]

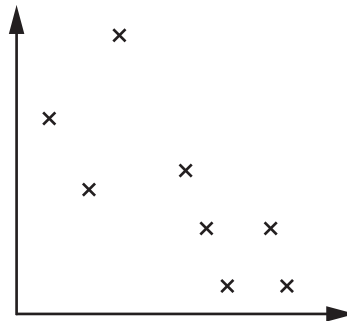
15 The table shows the number of spots on each of 30 ladybirds.

Number of spots	0	2	7	10	13
Frequency	5	2	11	9	3

Work out the mean number of spots.

..... [3]

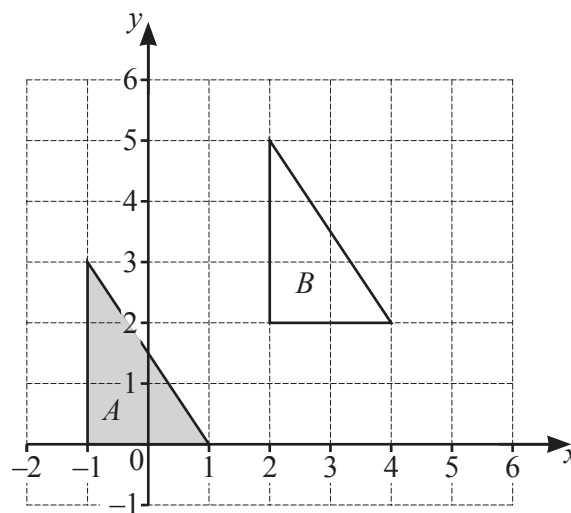
16



What type of correlation is shown on the scatter diagram?

..... [1]

17



Describe fully the **single** transformation that maps triangle *A* onto triangle *B*.

.....

..... [2]

18 Find the highest common factor (HCF) of 15 and 65.

..... [1]

19 A machine produces rivets.

For every 50 rivets the machine produces, 1 rivet is defective.

(a) A rivet is chosen at random.

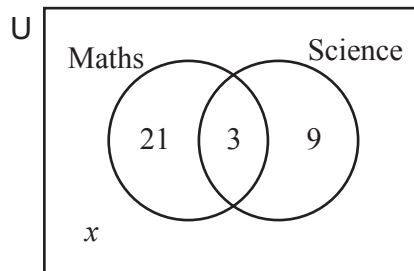
Find the probability that this rivet is defective.

..... [1]

(b) In a batch of 10 000 rivets, find the expected number of defective rivets.

..... [2]

20



The number of students in a class studying maths and science are shown in the Venn diagram.

(a) Write down how many students study both subjects.

..... [1]

(b) Find how many students study only one of these subjects.

..... [1]

(c) There are 50 students altogether.
 x students do not study either maths or science.

Find the value of x .

$x =$ [2]

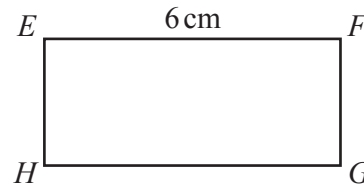
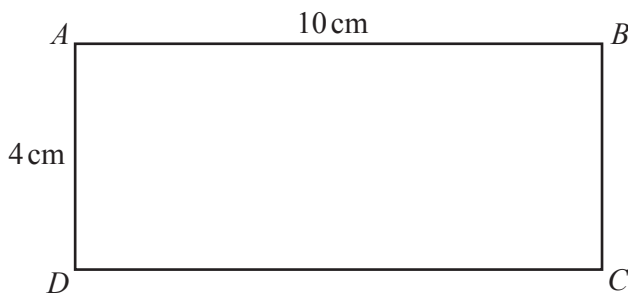
Questions 21, 22 and 23 are printed on the next page.

- 21 The width of a fibre is 0.000 019 m.

Write the width in standard form.

..... m [1]

22



NOT TO
SCALE

Rectangles $ABCD$ and $EFGH$ are mathematically similar.

Work out EH .

$EH =$ cm [2]

- 23 Solve.

$$10x + 7 < 5$$

..... [2]

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