Cambridge Assessment International Education

Cambridge IGCSE™

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER				

0499619041

CAMBRIDGE INTERNATIONAL MATHEMATICS **0607/12**

Paper 1 (Core) **February/March 2024**

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 **12** pages. Any blank pages are indicated.

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 25% as a fraction.

..... [1]

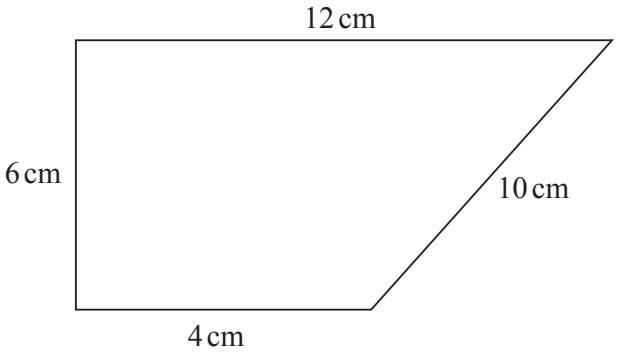
2 Write down the value of $\sqrt{81}$.

..... [1]

3 Change 305 centimetres into metres.

..... m [1]

4



NOT TO SCALE

Find the perimeter of this quadrilateral.

..... cm [1]

5

A card is chosen at random from these cards.

Which letter is least likely to be chosen?

..... [1]

6 Insert brackets to make this statement correct.

$$7 \times 4 - 2 = 14$$

[1]

7 x, 9, 11, 13, y, 17, 19, …

This is a number sequence.

(a) Find the value of x and the value of y in this sequence.

$x =$ .....

$y =$ ..... [1]

(b) Explain why 58 is not in this sequence.

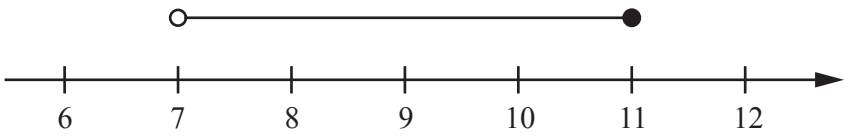
..... [1]

8 Work out.

$$\frac{-5 \times 9}{-3}$$

..... [1]

9



Write down all the integers that satisfy the inequality shown on this number line.

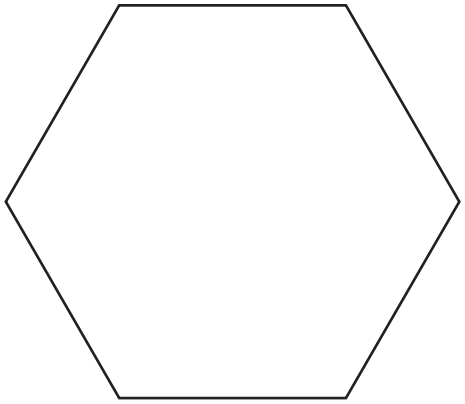
..... [1]

10 The four sides of a quadrilateral are all the same length.
The quadrilateral has no right angles.

Write down the mathematical name of this shape.

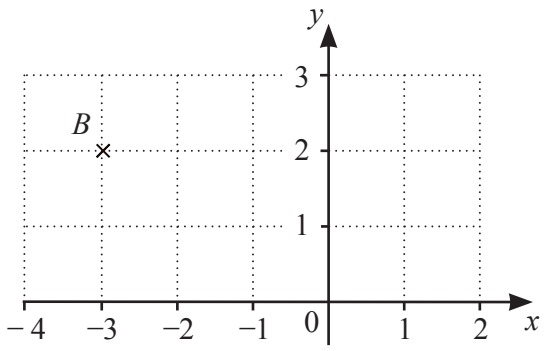
..... [1]

11 Draw all the lines of symmetry on this regular hexagon.



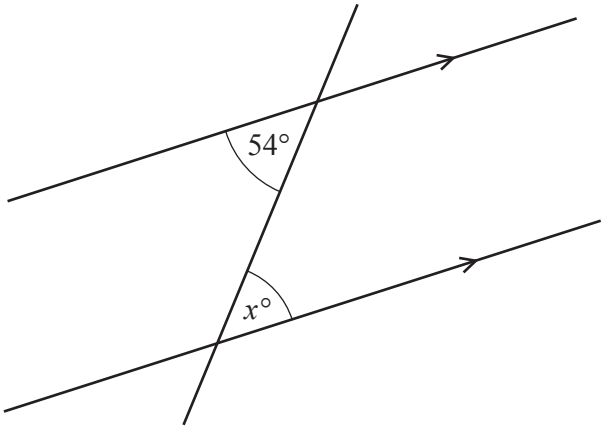
[2]

12



Write down the coordinates of point B. (..... , ...) [1]

13



NOT TO SCALE

Complete the statement.

Angle x = ... because ..... [2]

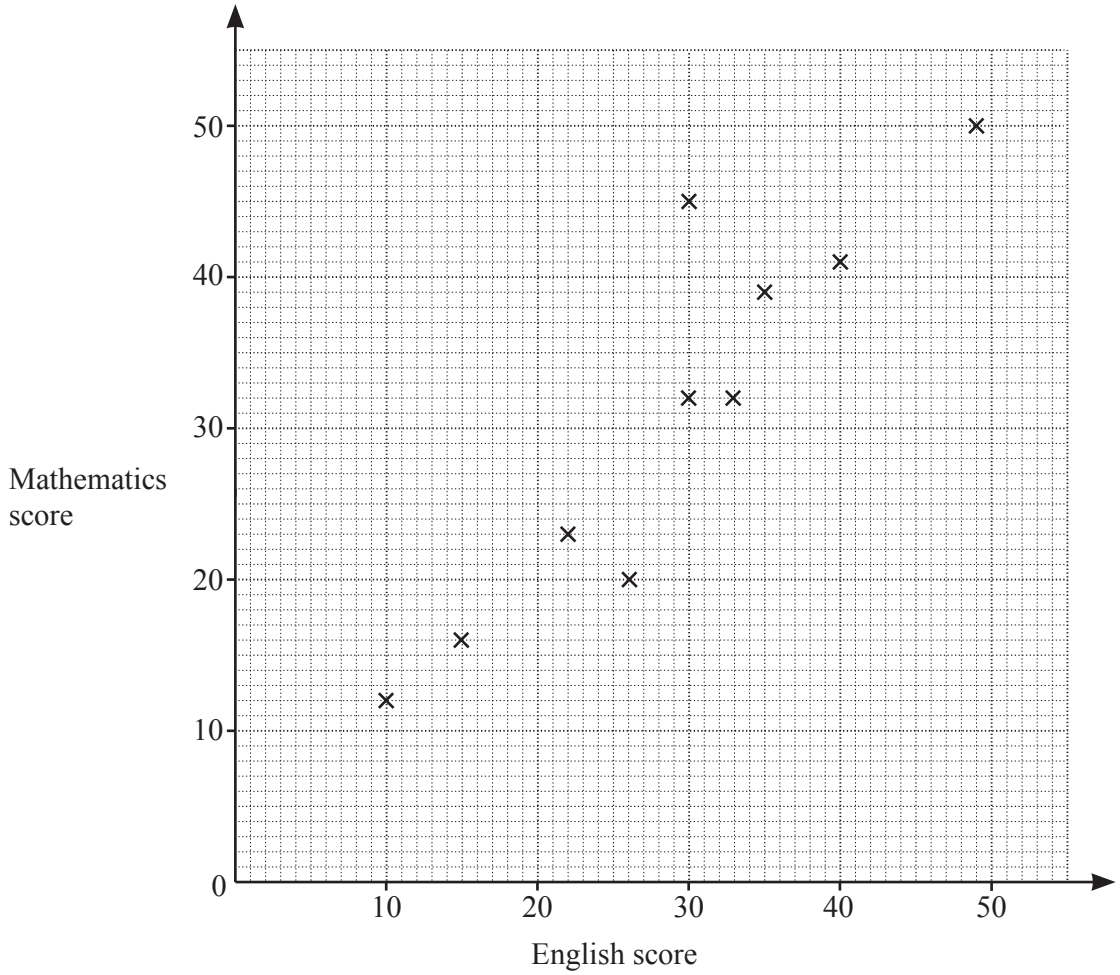
14 Ola asks 60 students what type of pet they have.
She wants to draw a pie chart to show this information.

Complete the table.

Type of pet	Number of students	Angle in the pie chart
Cat	9	54°
Rabbit		180°
Others	11	
None		60°

[3]

15 The scatter diagram shows the scores of each of 10 students in an English test and a mathematics test.



(a) The mean of the English test is 29 and the mean of the mathematics test is 31.
Draw a line of best fit on the scatter diagram. [2]

(b) Asrah scored 27 in the English test.
She did not take the mathematics test.

Use your line of best fit to estimate a score for her mathematics test.

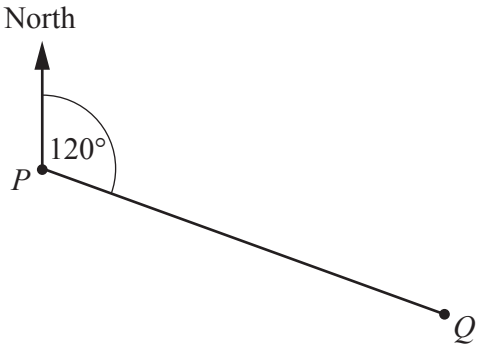
..... [1]

(c) On the scatter diagram put a ring around the cross which shows the student who had a much higher mark in the mathematics test than in the English test. [1]

16 Find the equation of the line that is parallel to the line $2y = -4x + 5$ that passes through the point $(0, -3)$.

..... [2]

17

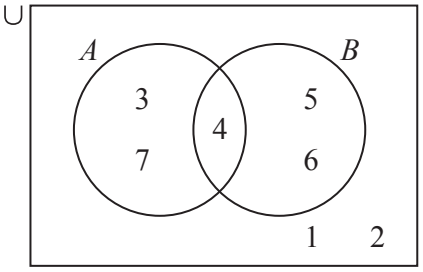


NOT TO SCALE

The bearing of Q from P is 120°.
Find the bearing of P from Q.

..... [2]

18



(a) List the members of set A.

{ ..... } [1]

(b) List the members of set B'.

{ ..... } [1]

(c) Find n(B).

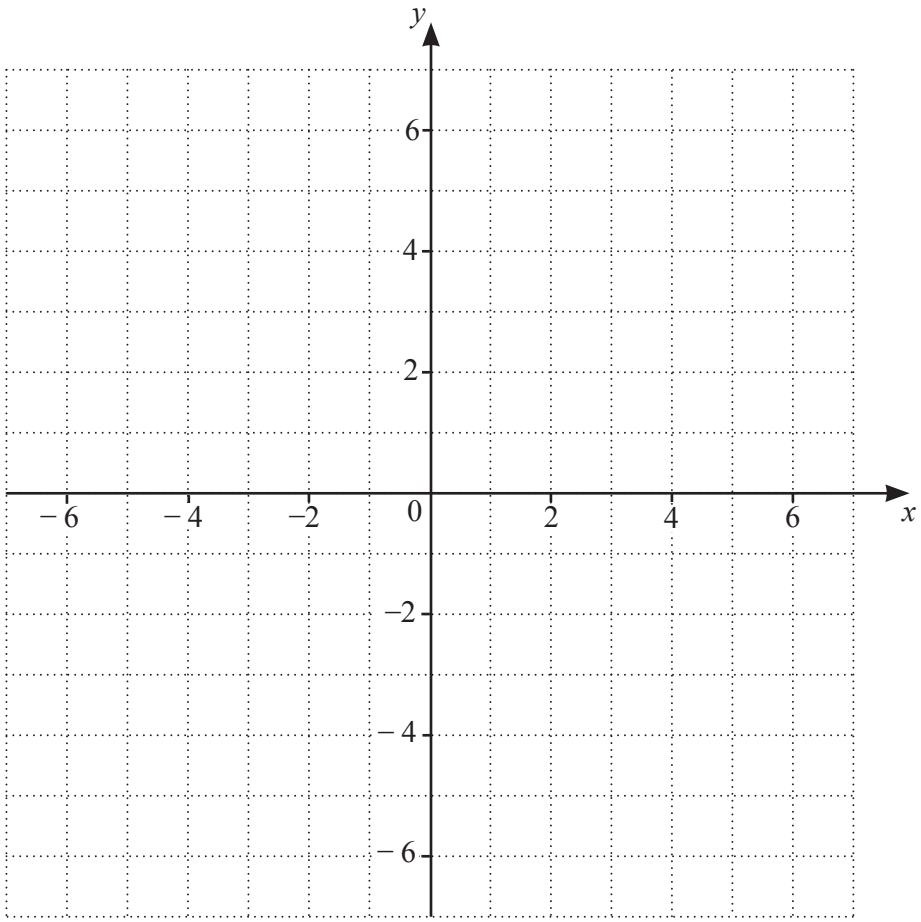
..... [1]

(d) List the members of $(A \cup B)'$.

{ ..... } [1]

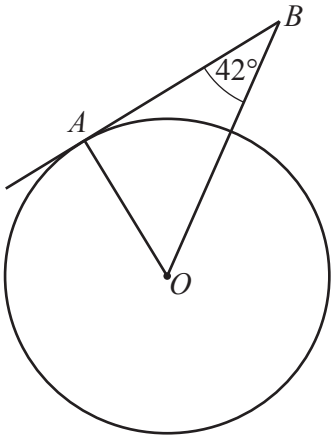
19 The point A (2, 4) is rotated through 180° about the origin.

Plot the image of point A.



[2]

20



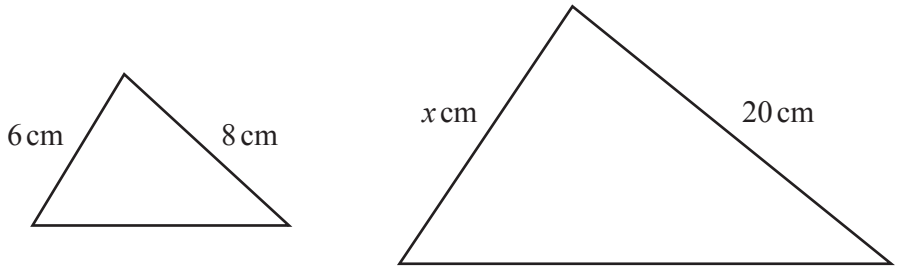
NOT TO SCALE

O is the centre of a circle.
AB is a tangent to the circle at A and angle $ABO = 42°$.

Find angle AOB.

Angle AOB = ... [2]

21



NOT TO SCALE

These two triangles are similar.

Find the value of x.

$x =$ ..... [2]

22 Solve the simultaneous equations.

$$3x + y = 7$$
$$x + 4y = 6$$

$x =$ .....

$y =$ ..... [3]

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