



CANDIDATE
NAME

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CENTRE
NUMBER

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CANDIDATE
NUMBER

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* 0 4 9 9 6 1 9 0 4 1 *

0607/12

February/March 2024

45 minutes

You must answer on the question paper.

You will need: Geometrical instruments

- 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.

- 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]

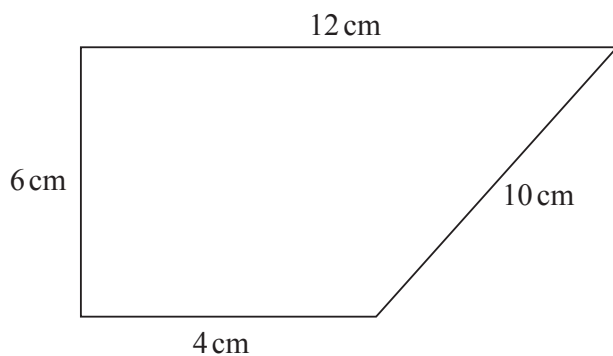
- 2 Write down the value of $\sqrt{81}$.

..... [1]

- 3 Change 305 centimetres into metres.

..... m [1]

4



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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 $x, 9, 11, 13, y, 17, 19, \dots$

This is a number sequence.

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

$$x = \dots\dots\dots$$

$$y = \dots\dots\dots [1]$$

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

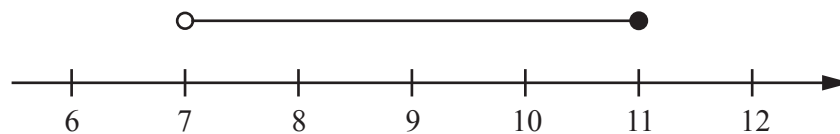
$\dots\dots\dots [1]$

- 8 Work out.

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

$\dots\dots\dots [1]$

- 9



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

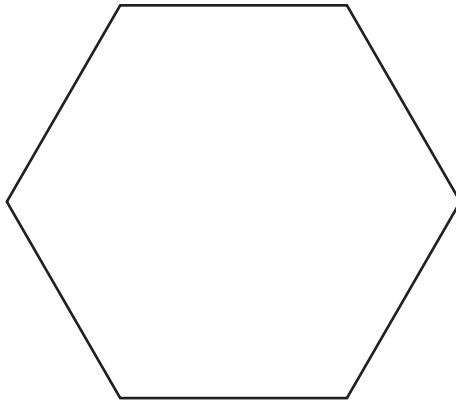
$\dots\dots\dots [1]$

- 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.

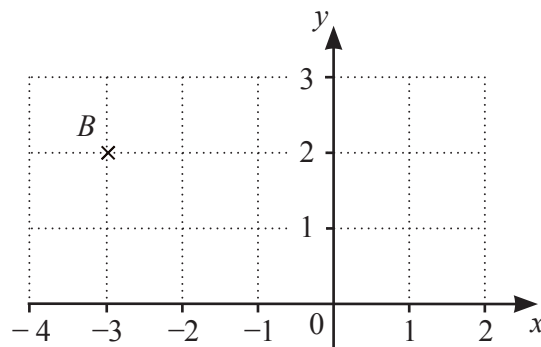
..... [1]

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



[2]

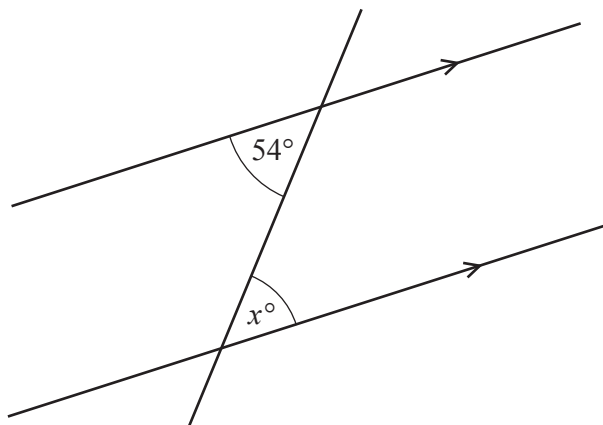
12



Write down the coordinates of point *B*.

(.....,) [1]

13

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Complete the statement.

Angle $x = \dots\dots\dots$ because $\dots\dots\dots$ [2]

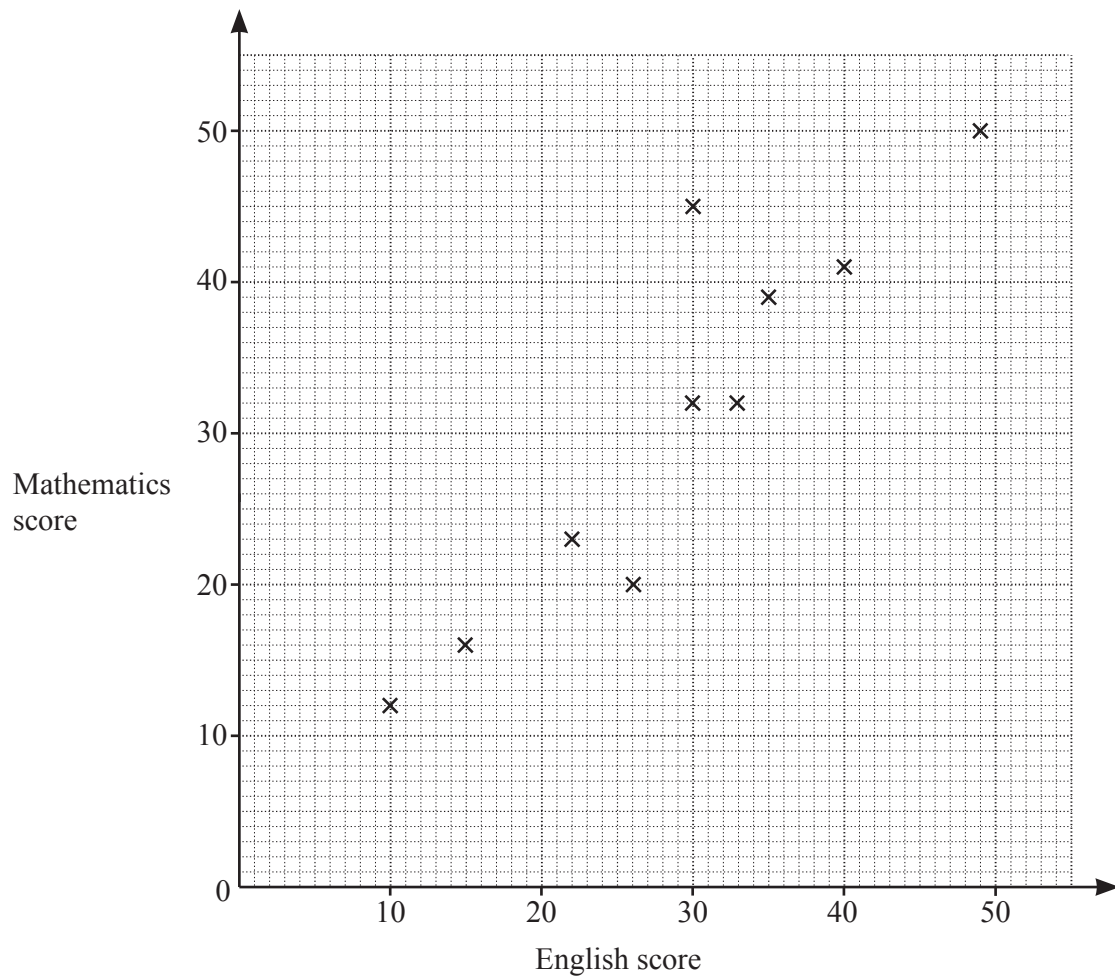
- 14** Ola asks 60 students what type of pet they have.
She wants to draw a pie chart to show this information.

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]

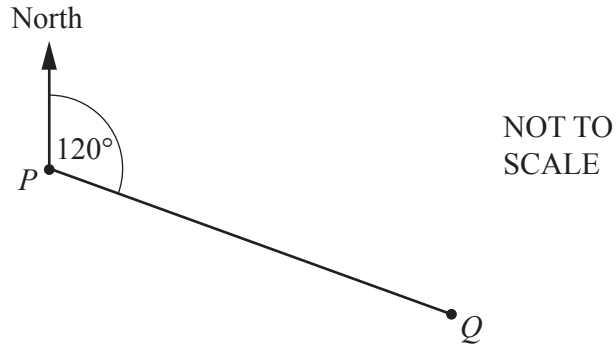
- (c) On the scatter diagram put a ring around the cross which shows the student who had a much higher mark in the mathematics test than in the English test.

[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]

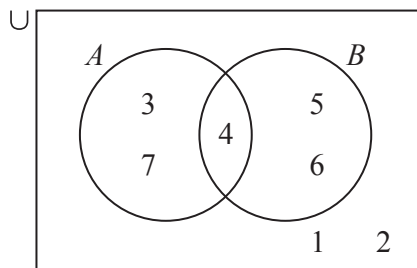
17



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 $n(B)$.

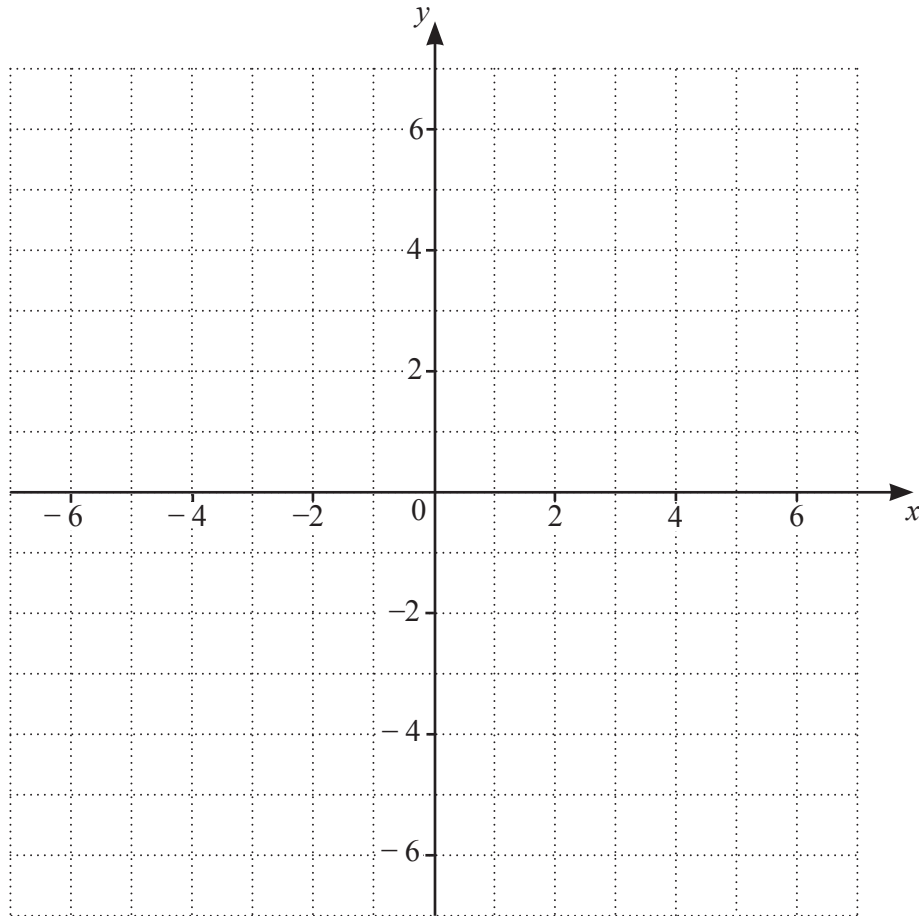
..... [1]

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

{ } [1]

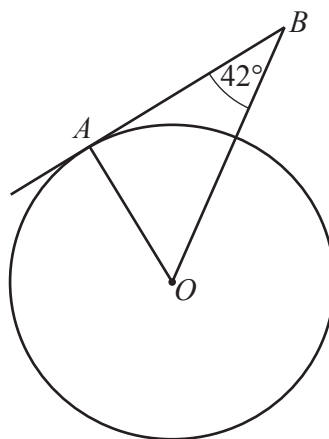
- 19 The point $A(2, 4)$ is rotated through 180° about the origin.

Plot the image of point A .



[2]

20



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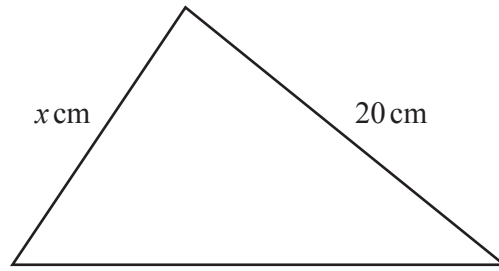
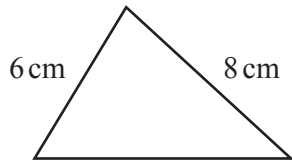
O is the centre of a circle.

AB is a tangent to the circle at A and angle $ABO = 42^\circ$.

Find angle AOB .

Angle $AOB = \dots\dots\dots$ [2]

21

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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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