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MATHEMATICS

0580/11

Paper 1 Non-calculator (Core)

May/June 2026

1 hour 30 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. Do **not** use correction fluid or tape.
- 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.

INFORMATION

- The total mark for this paper is 80.
- The number of marks for each question or part question is shown in brackets [].

This document has **16** pages.

List of formulas

Area, A , of triangle, base b , height h .

$$A = \frac{1}{2}bh$$

Area, A , of circle of radius r .

$$A = \pi r^2$$

Circumference, C , of circle of 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 .

$$A = \pi rl$$

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 .

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





Calculators must **not** be used in this paper.

1

1.694	$\sqrt{18}$	6	6.666	7	$\sqrt{225}$	25	27	39	56	1000
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From the list of numbers, write down

(a) an even number

..... [1]

(b) a factor of 28

..... [1]

(c) a square number

..... [1]

(d) a prime number

..... [1]

(e) an irrational number.

..... [1]

2 (a) Bella is b years old.
Alan is 5 years older than Bella.

Write an expression, in terms of b , for how old Alan is.

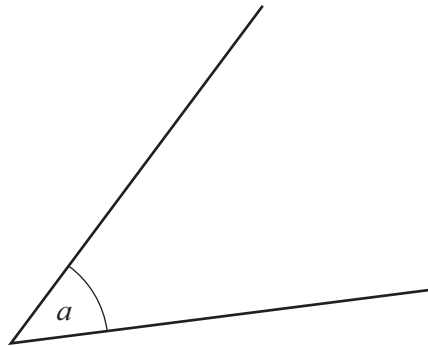
..... [1]

(b) Write an expression for the total cost, in cents, of x bags of sweets costing 65 cents each.

..... cents [1]



3



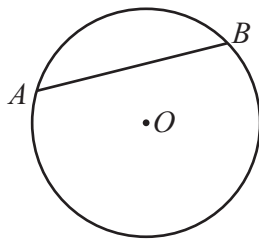
(a) Measure angle a .

..... [1]

(b) Write down the mathematical name for this type of angle.

..... [1]

4 (a) Points A and B lie on a circle, centre O , as shown in the diagram.



Write down the mathematical name for line AB .

..... [1]

(b) A quadrilateral has

- four equal sides
- no right angles
- opposite angles that are equal.

Write down the mathematical name for this quadrilateral.

..... [1]





5 (a) Write $\frac{1}{2}$ as a decimal.

..... [1]

(b) Write $\frac{9}{10}$ as a percentage.

.....% [1]

(c) Write 0.15 as a fraction in its simplest form.

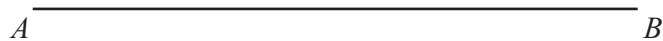
..... [1]

6 Triangle ABC has sides $AC = 7.4$ cm and $BC = 4.6$ cm.

Using a ruler and compasses only, construct triangle ABC .

Leave in your construction arcs.

The side AB has been drawn for you.



[2]



- 7 (a) Two fair 4-sided dice have faces numbered 1 to 4.
The dice are thrown, and the numbers are multiplied to give a total.
The table shows all the possible results.

		dice B			
		1	2	3	4
dice A	1	1	2	3	4
	2	2	4	6	8
	3	3	6	9	12
	4	4	8	12	16

Find the probability the total is

- (i) 12

..... [1]

- (ii) 5

..... [1]

- (iii) a number that is less than 20.

..... [1]

- (b) A biased 6-sided dice, numbered 1 to 6, is thrown.
The probability of scoring the number 6 is 0.2 .

Work out the probability of scoring a number less than 6.

..... [1]

- 8 In a town, the lowest temperature one night is -12.6°C .
The highest temperature the next day is 25.7°C .

Calculate the difference between these two temperatures.

..... $^{\circ}\text{C}$ [1]



9 When Ahmed gets out of bed he takes

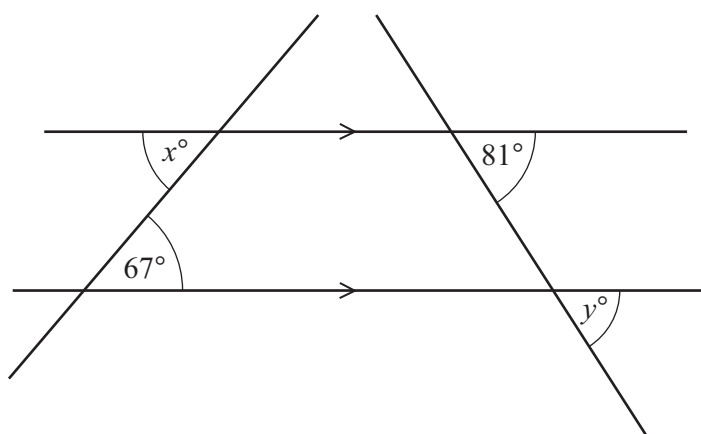
- 12 minutes to get dressed
- 26 minutes to eat breakfast
- 37 minutes to walk to the station.

Ahmed must be at the station by 09 45.

Work out the **latest** time Ahmed can get out of bed.

..... [2]

10 The diagram shows two straight lines intersecting two parallel lines.



NOT TO SCALE

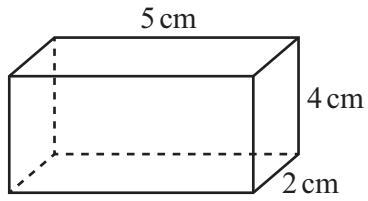
Complete each of these statements with the correct geometrical reason.

$x = 67$ because

$y = 81$ because

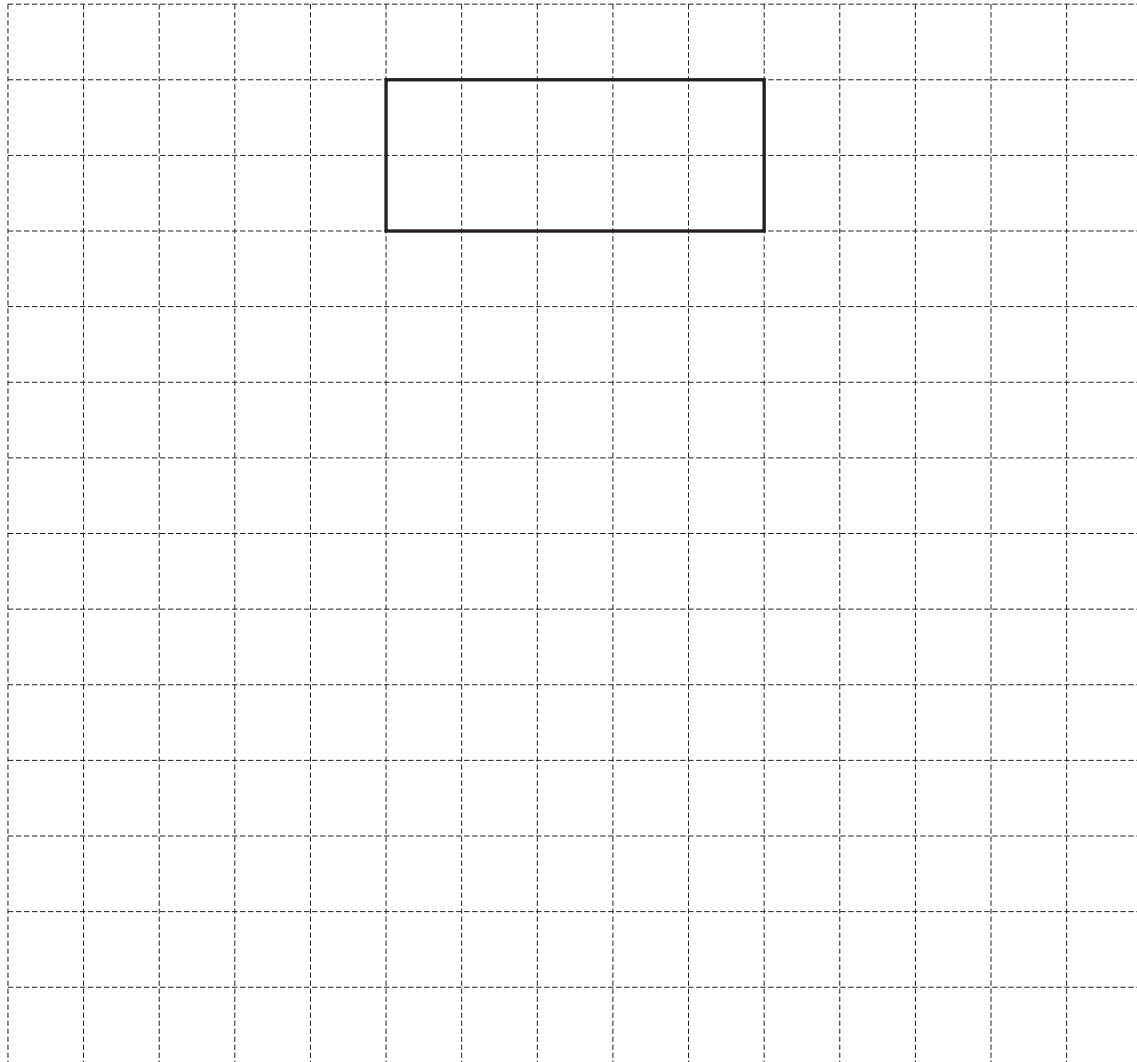
[2]

11



NOT TO SCALE

On the 1cm^2 grid, complete a net of this cuboid.
One face has been drawn for you.



[3]



- 12 The stem-and-leaf diagram shows the lengths, in centimetres, of 32 wooden planks.

23	3	4	4	5	6	6	8	9			
24	0	0	1	1	1	1	3	6	8	8	9
25	2	3	5	6	7	9	9	9			
26	0	0	1	2	4						

key : 23 | 3 represents 233 cm

- (a) Find the range.

..... cm [1]

- (b) Find the mode.

..... cm [1]

- (c) Find the median.

..... cm [1]

- (d) Find the fraction of all these planks which are less than 236 cm.
Write your answer as a fraction in its simplest form.

..... [2]



- 13 By writing each number in the calculation correct to 1 significant figure, work out an estimate for the value of

$$\frac{9.57 \times 3.84}{6.72 + 1.13}.$$

..... [2]

- 14 A bag contains 45 balls.
The balls are red or green.
The balls are in the ratio red balls : green balls = 2 : 3.

Carlos puts 4 more red balls and x more green balls into the bag.
The balls are now in the ratio red balls : green balls = 1 : 2.

Find the value of x .

$x =$ [4]

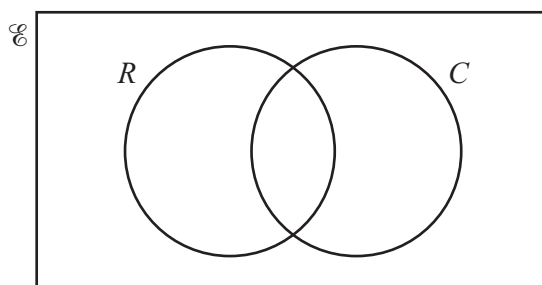


15 (a) 60 people complete a survey about hobbies.

41 people like reading books (R).

31 people like cookery (C).

11 do not like reading books and do not like cookery.



(i) Complete the Venn diagram.

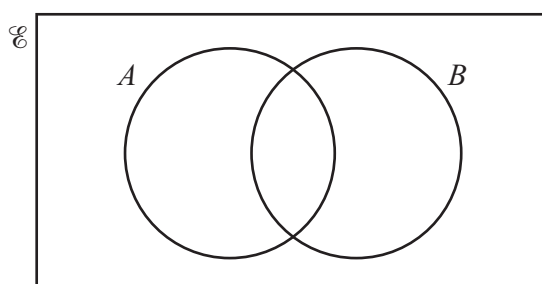
[2]

(ii) One of these 60 people is picked at random.

Find the probability that they like cookery but they do not like reading books.

..... [1]

(b)



Shade $A \cap B$.

[1]



- 16 Buses at a station go to Alve or to Riba.
 Buses leave every 16 minutes for Alve.
 Buses leave every 28 minutes for Riba.
 At 08 25 a bus for Alve and a bus for Riba leave the station together.

Find the next time a bus for Alve and a bus for Riba leave the station together.

..... [3]

- 17 Work out.

$$2\frac{1}{6} - 1\frac{3}{5}$$

Write your answer as a fraction in its simplest form.

..... [3]

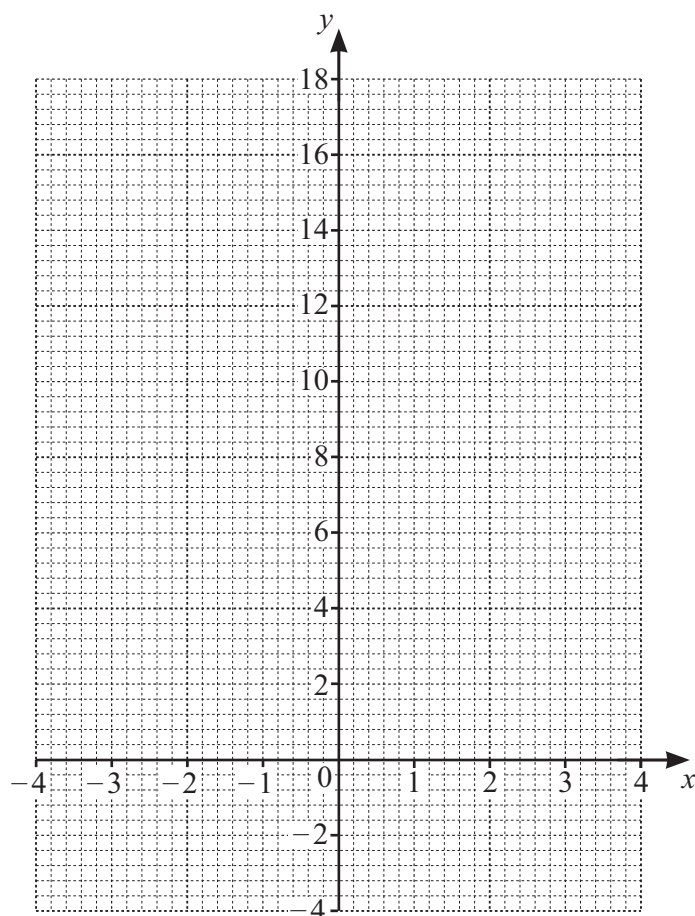


18 (a) Complete the table of values for $y = x^2 + x - 3$.

x	-4	-3	-2	-1	0	1	2	3	4
y	9		-1	-3	-3	-1		9	

[2]

(b) On the grid, draw the graph of $y = x^2 + x - 3$ for $-4 \leq x \leq 4$.



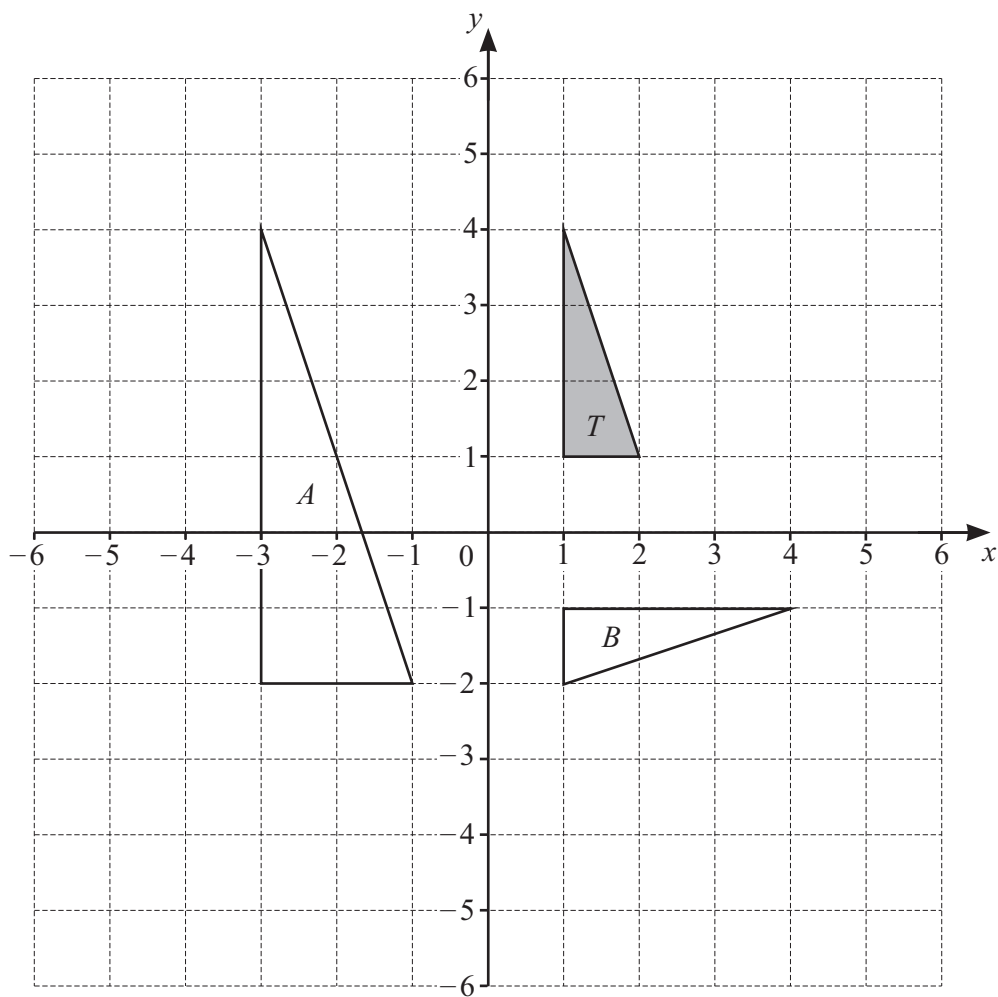
[4]

(c) Write down the equation of the line of symmetry of the graph.

..... [1]

(d) Use your graph to solve the equation $x^2 + x - 3 = 0$.

$x = \dots\dots\dots$ or $x = \dots\dots\dots$ [2]



(a) On the grid, draw the image of triangle T after a translation by the vector $\begin{pmatrix} 3 \\ -6 \end{pmatrix}$. [2]

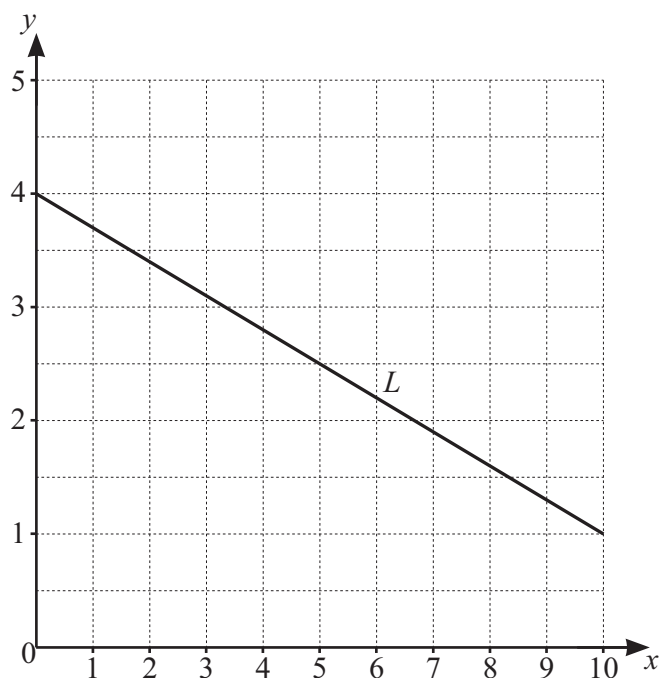
(b) On the grid, draw the image of triangle T after a reflection in the line $y = -1$. [2]

(c) Describe fully the **single** transformation that maps triangle T onto triangle A .
 [3]

(d) Describe fully the **single** transformation that maps triangle T onto triangle B .
 [3]



- 20 The diagram shows line L on a grid.



Find the equation of line L in the form $y = mx + c$.

$$y = \dots\dots\dots [3]$$

- 21 (a) Make T the subject of the formula.

$$P = Ty$$

$$T = \dots\dots\dots [1]$$

- (b) Expand the brackets and simplify.

$$(x + 8)(x - 5)$$

$$\dots\dots\dots [2]$$



- 22 The time, t seconds, for the winner of a race is 12.7 seconds, correct to 3 significant figures.

Complete this statement about the value of t .

..... $\leq t <$ [2]

- 23 Solve the simultaneous equations.

$$\begin{aligned} 3x + 4y &= 1 \\ 2x - 3y &= 12 \end{aligned}$$

$x =$

$y =$ [4]

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