CAMBRIDGE
International Education

Scan Me

Cambridge IGCSE™

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER			

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.

© Cambridge University Press & Assessment 2026
Worked solutions and explanations © 2026 Examii. All rights reserved.

Scan Me

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

© Cambridge University Press & Assessment 2026
Worked solutions and explanations © 2026 Examii. All rights reserved.

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

1

1.694	$\sqrt{18}$	6	6.666	7	$\sqrt{225}$	25	27	39	56	1000

From the list of numbers, write down

(a) an even number

6 ends in 6 → even

Examii Insight Even numbers end in 0, 2, 4, 6 or 8 (56 and 1000 also work).

6 ..... [1]

(b) a factor of 28

28 ÷ 7 = 4 ✓

Examii Insight A factor divides 28 exactly, with no remainder.

7 ..... [1]

(c) a square number

5 × 5 = 25

Examii Insight Careful: $\sqrt{225} = 15$ is not a square number.

25 ..... [1]

(d) a prime number

7: only factors 1 and 7

Examii Insight A prime has exactly two factors.

7 ..... [1]

(e) an irrational number.

$\sqrt{18} = 3\sqrt{2}$

Examii Insight 18 is not a square number, so √18 never ends or repeats.

√18 ..... [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.

b + 5

Examii Insight Older means more years, so add 5 to b.

b + 5 ..... [1]

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

x × 65 = 65x

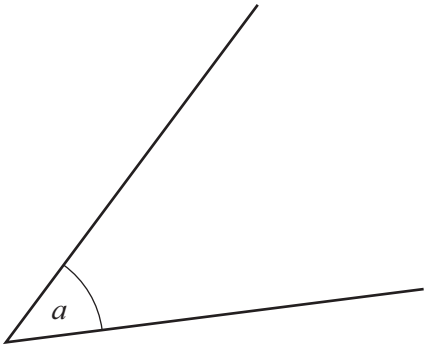
Examii Insight Each bag is 65 cents; x bags cost 65 × x.

65x ..... cents [1]

© Cambridge University Press & Assessment 2026
Worked solutions and explanations © 2026 Examii. All rights reserved.

Scan Me

3



(a) Measure angle a.

a = 46°

Examii Insight Put the centre on the corner and 0 on one arm; read the inside scale (44°–48° allowed). Printing may alter the scale.

46° ..... [1]

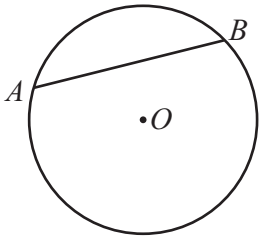
(b) Write down the mathematical name for this type of angle.

less than 90° → acute

Examii Insight Acute: less than 90°. Obtuse: between 90° and 180°.

acute ..... [1]

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



AB joins two points on the circle → chord

Examii Insight It does not pass through O, so it is not a diameter.

Write down the mathematical name for line AB.

chord ..... [1]

(b) A quadrilateral has

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

Write down the mathematical name for this quadrilateral.

rhombus ..... [1]

4 equal sides, no right angles → rhombus

Examii Insight A square also has 4 equal sides, but it has right angles.

© Cambridge University Press & Assessment 2026
Worked solutions and explanations © 2026 Examii. All rights reserved.

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

$\frac{1}{2} = 1 \div 2 = 0.5$

Examii Insight Divide the top by the bottom.

0.5 ..... [1]

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

$\frac{9}{10} \times 100 = 90$

Examii Insight Percent means "out of 100".

90 ..... % [1]

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

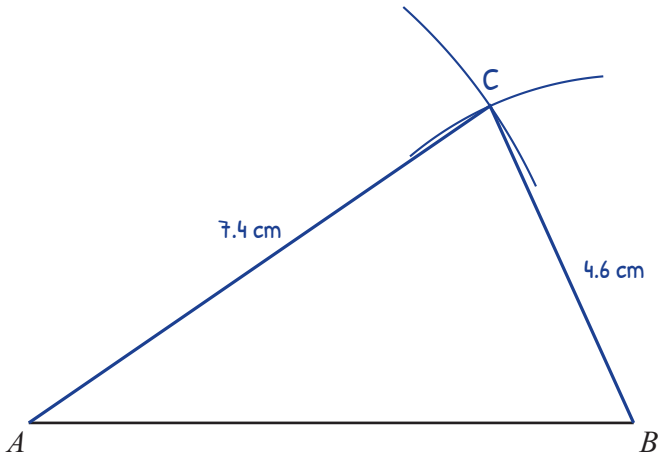
$0.15 = \frac{15}{100} = \frac{3}{20}$

Examii Insight Two decimal places → over 100. ÷5 top and bottom.

$\frac{3}{20}$ ..... [1]

6 Triangle ABC has sides $AC = 7.4\,\text{cm}$ and $BC = 4.6\,\text{cm}$.

Using a ruler and compasses only, construct triangle ABC.
Leave in your construction arcs.
The side AB has been drawn for you.



[2]

Arc from A

Compasses open to 7.4 cm; centre A; draw an arc above AB.

Arc from B, then join

Compasses open to 4.6 cm; centre B; arc crosses the first arc at C. Join AC and BC.

Examii Insight

01 Arc from A
- AC = 7.4 cm, so C is 7.4 cm from A.

02 Arc from B, then join
- BC = 4.6 cm.
- Leave both arcs showing — they earn the marks.

© Cambridge University Press & Assessment 2026
Worked solutions and explanations © 2026 Examii. All rights reserved.

Scan Me

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*

dice *A*	**1**	**2**	**3**	**4**
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

$\frac{2}{16} = \frac{1}{8}$

Examii Insight 12 appears 2 times out of 16 results.

$\frac{1}{8}$ [1]

(ii) 5

No 5 in the table → 0

Examii Insight An impossible event has probability 0.

0 [1]

(iii) a number that is less than 20.

$\frac{16}{16} = 1$

Examii Insight Every result is less than 20, so it is certain.

1 [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.

$1 - 0.2 = 0.8$

Examii Insight "Less than 6" means "not 6". Probabilities add up to 1.

0.8 [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.

$25.7 - (-12.6) = 25.7 + 12.6$

$= 38.3$

Examii Insight From −12.6 up to 0 is 12.6, then 25.7 more. Subtracting a negative means add.

38.3 °C [1]

© Cambridge University Press & Assessment 2026
Worked solutions and explanations © 2026 Examii. All rights reserved.

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.

Total time

12 + 26 + 37 = 75 min = 1 h 15 min

Count back from 09 45

09 45 – 1 h = 08 45

08 45 – 15 min = 08 30

∴ 08 30

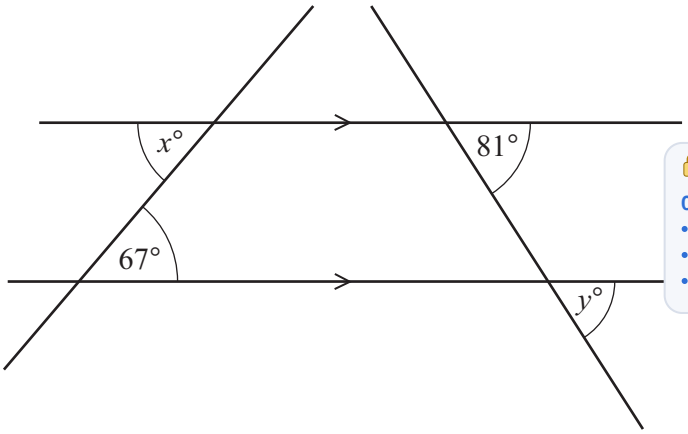
Examii Insight

01 Total time
- Add the three times.

02 Count back from 09 45
- Latest time to get up = arrival time – total time.

08 30 [2]

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



NOT TO SCALE

Examii Insight

01 Parallel line angle rules
- x and 67°: Z-shape → alternate angles are equal.
- y and 81°: F-shape → corresponding angles are equal.
- Write the full reason, not just "Z" or "F".

Complete each of these statements with the correct geometrical reason.

$x = 67$ because alternate angles are equal

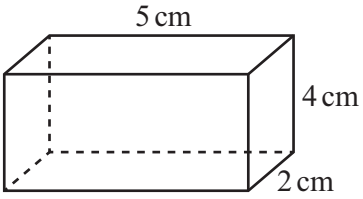
$y = 81$ because corresponding angles are equal

[2]

© Cambridge University Press & Assessment 2026
Worked solutions and explanations © 2026 Examii. All rights reserved.

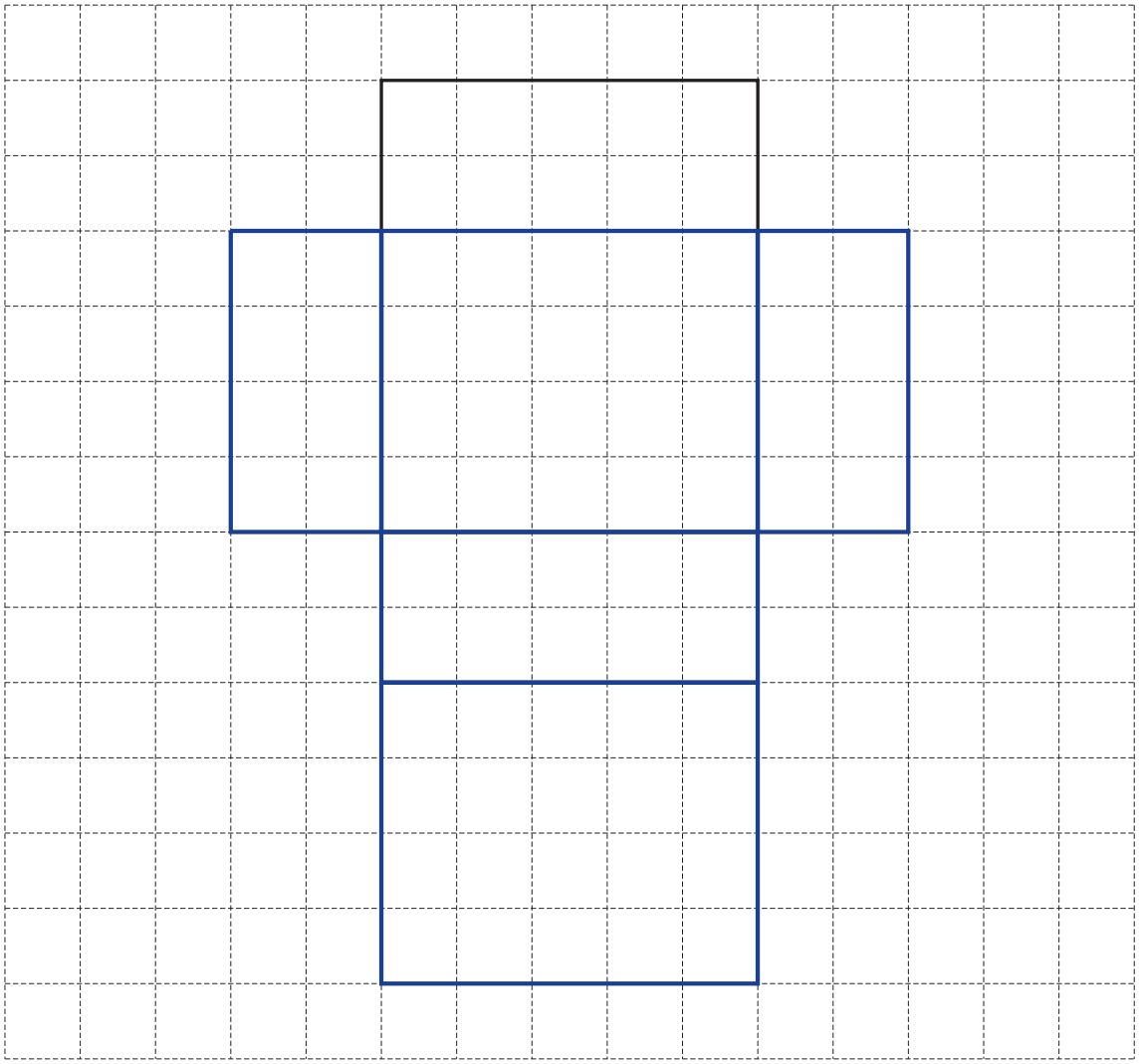
Scan Me

11



NOT TO SCALE

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



[3]

Examii Insight

01 Faces of a 5 × 4 × 2 cuboid

- 6 faces: two 5×2, two 5×4, two 4×2.
- Strip down: 5×2 (given), 5×4, 5×2, 5×4.
- Put a 2×4 face on each side of the first 5×4 face.
- Faces must join edge to edge.

© Cambridge University Press & Assessment 2026
Worked solutions and explanations © 2026 Examii. All rights reserved.

Scan Me

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.

264 − 233 = 31

Examii Insight Largest 264, smallest 233.

31 cm [1]

(b) Find the mode.

241 appears 4 times

Examii Insight Mode = the value that appears most often.

241 cm [1]

(c) Find the median.

$\frac{32+1}{2}$ = 16.5th

$\frac{246+248}{2}$ = 247

Examii Insight 32 values → halfway between the 16th and 17th.

247 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.

Count less than 236

233, 234, 234, 235 → 4 planks

Fraction

$\frac{4}{32} = \frac{1}{8}$

$\therefore \frac{1}{8}$

Examii Insight

01 Count less than 236
- 236 itself is not included.

02 Fraction
- ÷4 top and bottom.

$\frac{1}{8}$ [2]

© Cambridge University Press & Assessment 2026
Worked solutions and explanations © 2026 Examii. All rights reserved.

Scan Me

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

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

Round to 1 s.f., then calculate

$\frac{10 \times 4}{7 + 1} = \frac{40}{8} = 5$

$\therefore$ 5

Examii Insight

01 Round to 1 s.f., then calculate
- 9.57 → 10, 3.84 → 4, 6.72 → 7, 1.13 → 1 (first non-zero digit).
- Work out the top and the bottom first.

5 ..... [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.

Share 45 in 2 : 3

45 ÷ 5 = 9 : red 18, green 27

New ratio 1 : 2

red = 18 + 4 = 22

green = 22 × 2 = 44

27 + x − 27 = 44 − 27

x = 17

$\therefore$ x = 17

Examii Insight

01 Share 45 in 2 : 3
- 2 + 3 = 5 parts; 2 × 9 and 3 × 9.

02 New ratio 1 : 2
- 1 : 2 → green is double the red.
- Take 27 from both sides to keep it balanced.

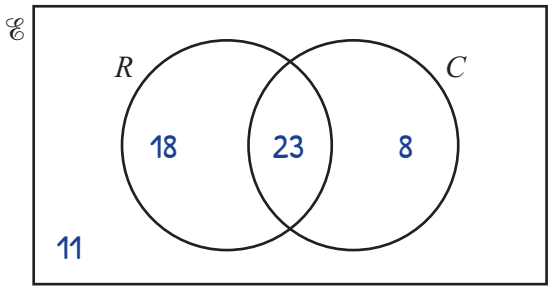
$x =$ 17 ..... [4]

© Cambridge University Press & Assessment 2026
Worked solutions and explanations © 2026 Examii. All rights reserved.

Scan Me

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.

Both (middle)

41 + 31 + 11 = 83

83 − 60 = 23

Only R, only C

R only = 41 − 23 = 18

C only = 31 − 23 = 8

Examii Insight

01 Both (middle)
- 83 is more than 60 people, so 23 are counted twice — they like both.

02 Only R, only C
- 11 goes outside both circles.
- Check: 18 + 23 + 8 + 11 = 60 ✓

[2]

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

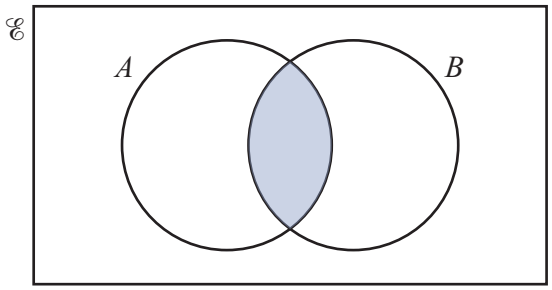
Find the probability that they like cookery but they do not like reading books.

C only = 8 people

Examii Insight Probability = 8 out of 60.

$\frac{8}{60}$ [1]

(b)



Examii Insight

01 A ∩ B
- ∩ means "and": shade only the overlap of A and B.

Shade $A \cap B$. [1]

© Cambridge University Press & Assessment 2026
Worked solutions and explanations © 2026 Examii. All rights reserved.

Scan Me

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.

Multiples

16: 16, 32, 48, 64, 80, 96, 112

LCM

28: 28, 56, 84, 112 → LCM = 112 min

Add the time

08 25 + 1 h 52 min = 10 17

∴ 10 17

Examii Insight

01 Multiples
- The buses leave together again after a common multiple.

02 LCM
- 112 min = 1 h 52 min.

03 Add the time
- 25 + 52 = 77 min = 1 h 17 min.

10 17 ..... [3]

17 Work out.

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

Write your answer as a fraction in its simplest form.

Improper fractions

$2\frac{1}{6} = \frac{13}{6}$

$1\frac{3}{5} = \frac{8}{5}$

Common denominator 30

$\frac{13}{6} - \frac{8}{5} = \frac{65}{30} - \frac{48}{30}$

$= \frac{17}{30}$

∴ $\frac{17}{30}$

Examii Insight

01 Improper fractions
- Whole × bottom + top.

02 Common denominator 30
- 6 × 5 = 30: multiply top and bottom by the same number.
- 17 is prime, so it is already simplest.

$\frac{17}{30}$ ..... [3]

© Cambridge University Press & Assessment 2026
Worked solutions and explanations © 2026 Examii. All rights reserved.

Scan Me

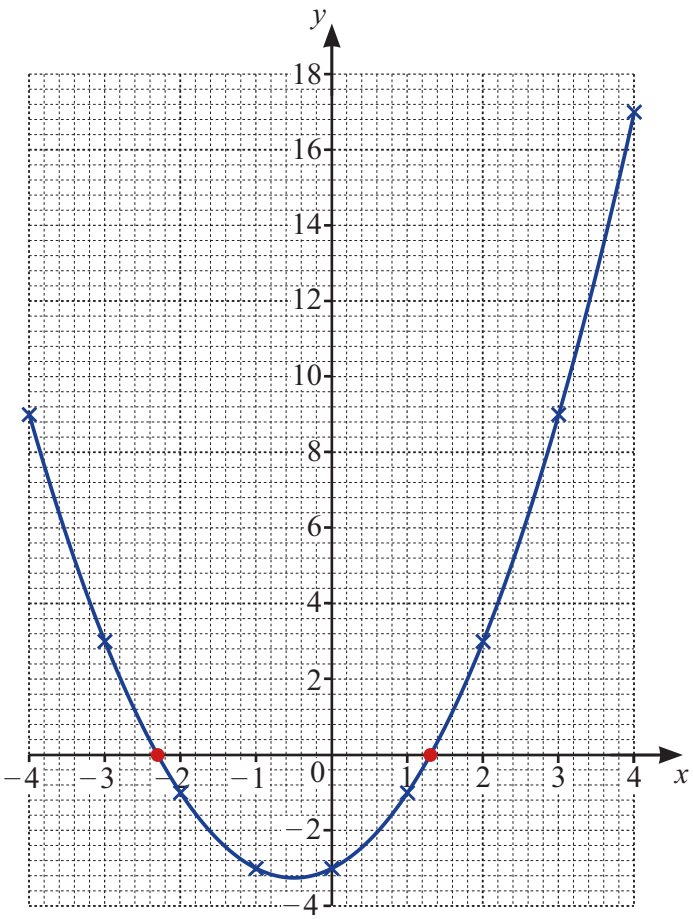
18 **(a)** Complete the table of values for $y = x^2 + x - 3$.

x	−4	−3	−2	−1	0	1	2	3	4
y	9	3	−1	−3	−3	−1	3	9	17

[2]

Examii Insight x = –3: 9 – 3 – 3 = 3; x = 2: 4 + 2 – 3 = 3; x = 4: 16 + 4 – 3 = 17.

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



Examii Insight

01 Plot and join

- Plot all 9 points from the table.
- Join with a smooth U-shaped curve, not straight lines.
- The bottom dips just below –3 between x = –1 and 0.

[4]

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

$x = -\frac{1}{2}$

Examii Insight y = –3 at both x = –1 and x = 0; halfway is –0.5.

x = –0.5 [1]

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

Read where the curve crosses the x-axis.

Examii Insight $x^2 + x - 3 = 0$ means y = 0. x ≈ –2.3 and x ≈ 1.3.

$x =$ −2.3 or $x =$ 1.3 [2]

© Cambridge University Press & Assessment 2026
Worked solutions and explanations © 2026 Examii. All rights reserved.

Scan Me

19

Examii Insight

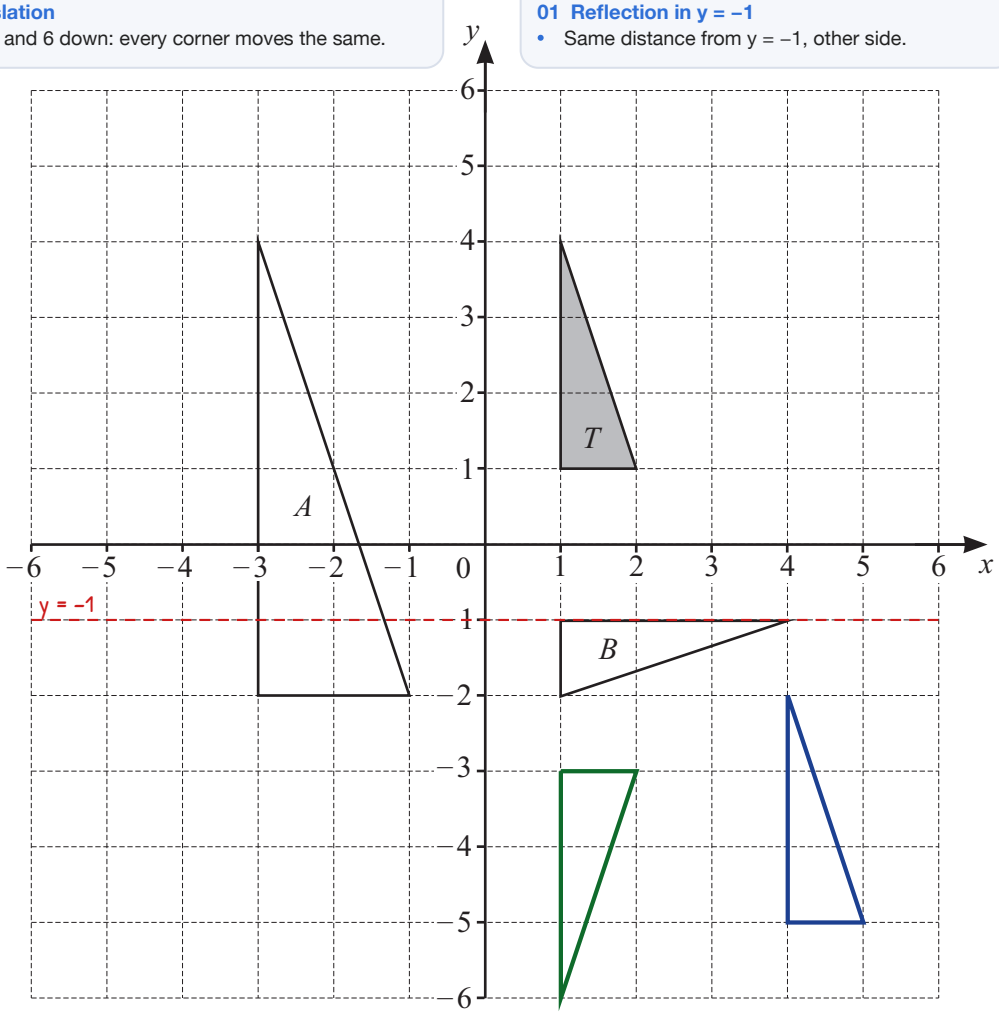
01 Translation

- 3 right and 6 down: every corner moves the same.

Examii Insight

01 Reflection in y = –1

- Same distance from y = –1, other side.



(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.

Enlargement, centre (5, 4), scale factor 2

..... [3]

Examii Insight Sides are twice as long → scale factor 2. Join matching corners; lines meet at the centre (5, 4).

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

Rotation, centre (0, 0), 90° clockwise

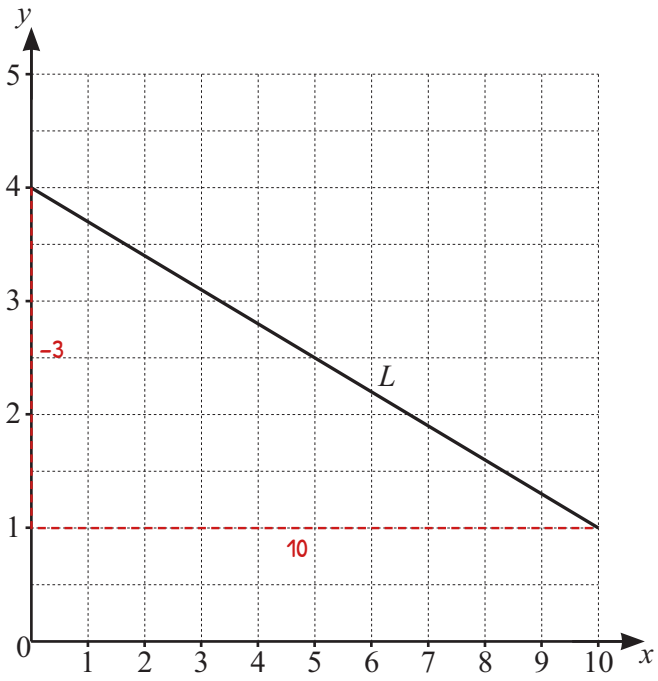
..... [3]

Examii Insight Same size, turned → rotation. Centre (0, 0), 90° clockwise (use tracing paper).

© Cambridge University Press & Assessment 2026
Worked solutions and explanations © 2026 Examii. All rights reserved.

Scan Me

20 The diagram shows line L on a grid.



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

Gradient and intercept

$m = \frac{1-4}{10-0} = -\frac{3}{10}$, $c = 4$

$\therefore$ $y = -0.3x + 4$

Examii Insight

01 Gradient and intercept
- From (0, 4) to (10, 1): down 3, across 10.
- c = where the line crosses the y-axis.

$y =$ $-0.3x + 4$ [3]

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

$P = Ty$

$\frac{P}{y} = \frac{Ty}{y}$

Examii Insight Ty = T × y, so ÷ y.

$T =$ $\frac{P}{y}$ [1]

(b) Expand the brackets and simplify.

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

Multiply out

$(x + 8)(x - 5) = x^2 - 5x + 8x - 40$

Collect

$= x^2 + 3x - 40$

$\therefore$ $x^2 + 3x - 40$

Examii Insight

01 Multiply out
- Every term × every term (4 terms).

02 Collect
- −5x + 8x = 3x.

$x^2 + 3x - 40$ [2]

© Cambridge University Press & Assessment 2026
Worked solutions and explanations © 2026 Examii. All rights reserved.

Scan Me

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.

Half a unit each way

12.7 − 0.05 = 12.65

12.7 + 0.05 = 12.75

Examii Insight

01 Half a unit each way
- 3 s.f. → nearest 0.1, so ± 0.05.
- 12.75 itself would round to 12.8, so use < on the right.

12.65 $\leqslant t <$ 12.75 [2]

23 Solve the simultaneous equations.

$$3x + 4y = 1$$
$$2x - 3y = 12$$

Make the x terms equal

(3x + 4y = 1) × 2 : 6x + 8y = 2

(2x − 3y = 12) × 3 : 6x − 9y = 36

Subtract to remove x

17y = −34

y = −2

Substitute

3x + 4(−2) = 1

3x − 8 + 8 = 1 + 8

x = 3

∴ x = 3, y = −2

Examii Insight

01 Make the x terms equal
- Multiply each equation by a number (both sides).

02 Subtract to remove x
- 8y − (−9y) = 17y; 2 − 36 = −34. Then ÷17.

03 Substitute
- +8 on both sides, then ÷3.

$x =$ 3

$y =$ −2

[4]

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 (Cambridge University Press & Assessment) 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 our 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 International Education is the name of our awarding body and a part of Cambridge University Press & Assessment, which is a department of the University of Cambridge.

Worked solutions and explanations © 2026 Examii. All rights reserved.