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MATHEMATICS

0580/12

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. Any blank pages are indicated.

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

..... [1]

- 2 (a) Add 63 and 28.

..... [1]

- (b) Work out 50% of 526.

..... [1]

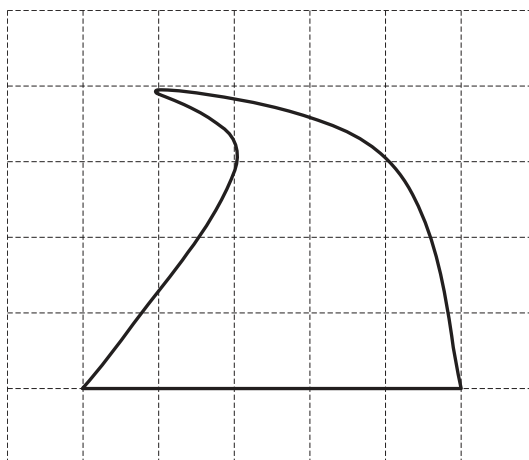
- 3 (a) Write 35% as a decimal.

..... [1]

- (b) Write $\frac{4}{5}$ as a percentage.

..... % [1]

- 4 The diagram shows a shape drawn on a 1 cm^2 grid.



By counting squares, estimate the area of the shape.

..... cm^2 [1]





5 (a) Write 65 432 correct to the nearest hundred.

..... [1]

(b) Write 0.04857 correct to 3 decimal places.

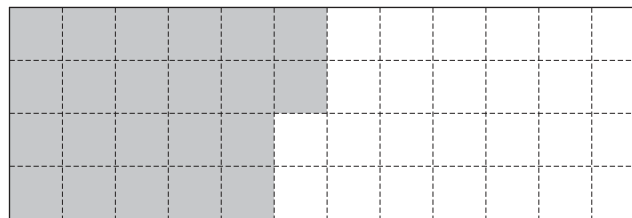
..... [1]

6 Put **one** pair of brackets into each calculation to make it correct.

(a) $7 \times 3 - 2 \times 4 = 28$ [1]

(b) $9 - 80 \div 8 - 6 = 5$ [1]

7



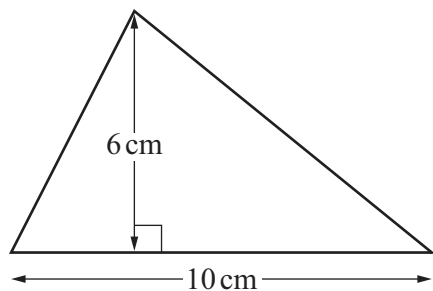
(a) Write down the fraction of the rectangle that is shaded.
Give your answer in its simplest form.

..... [2]

(b) On the diagram, shade some more squares so that $\frac{1}{6}$ of the rectangle is **not** shaded. [1]



8



NOT TO SCALE

Work out the area of the triangle.

..... cm^2 [1]

- 9 The stem-and-leaf diagram shows the time, in minutes, it takes 20 students to eat lunch.

0	7 8 9
1	1 3 5 6 9
2	3 4 5 5 7 8 8 9
3	1 2 2 9

key : 3|1 represents 31 minutes

Complete these statements.

- (a) students took between 10 and 30 minutes to eat lunch. [1]
- (b) % of the students took less than 18 minutes to eat lunch. [1]
- (c) The slowest student took minutes longer than the quickest student. [1]



- 10 Phil has $7y - 52$ toy cars.
Ann has $78 - 6y$ toy cars.
Phil and Ann have the same number of cars.

(a) Write down an equation to show this information.

..... [1]

(b) Solve your equation and work out the number of cars they each have.

They each have cars. [3]

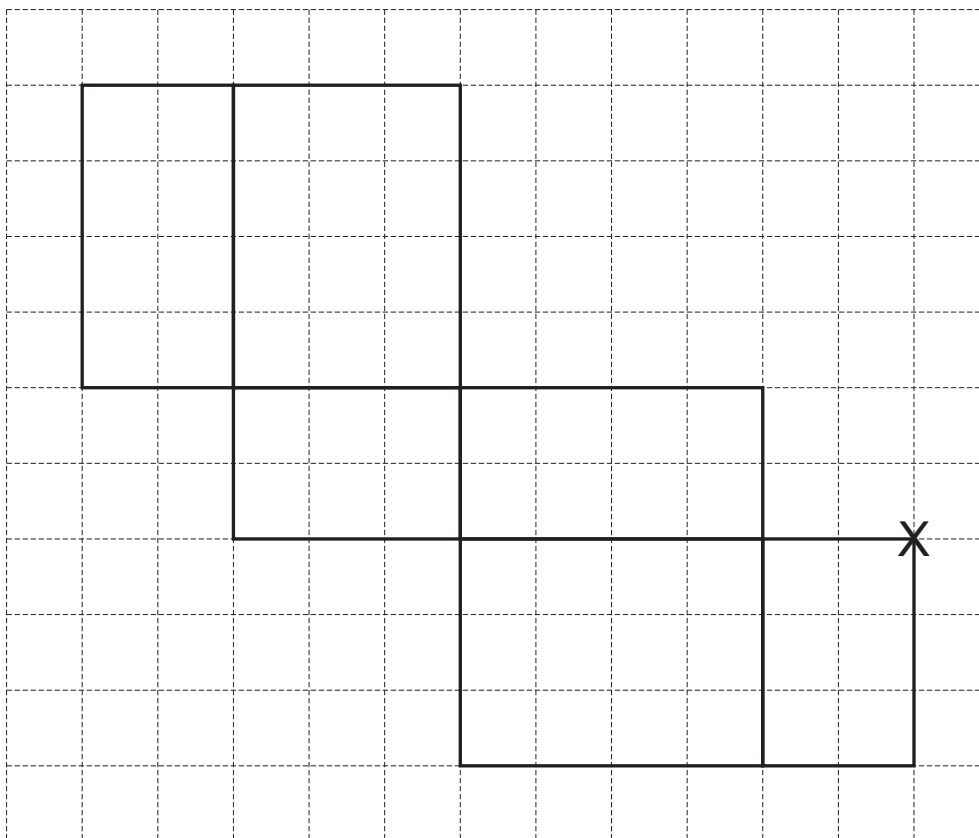
- 11 Complete these statements.

(a) 2 kg is the same as g. [1]

(b) 7 cm^2 is the same as mm^2 . [1]



- 12 To make a solid, a net is drawn on the 1cm^2 grid.



- (a) Write down the mathematical name for the solid.

..... [1]

- (b) Point X is marked on the diagram.

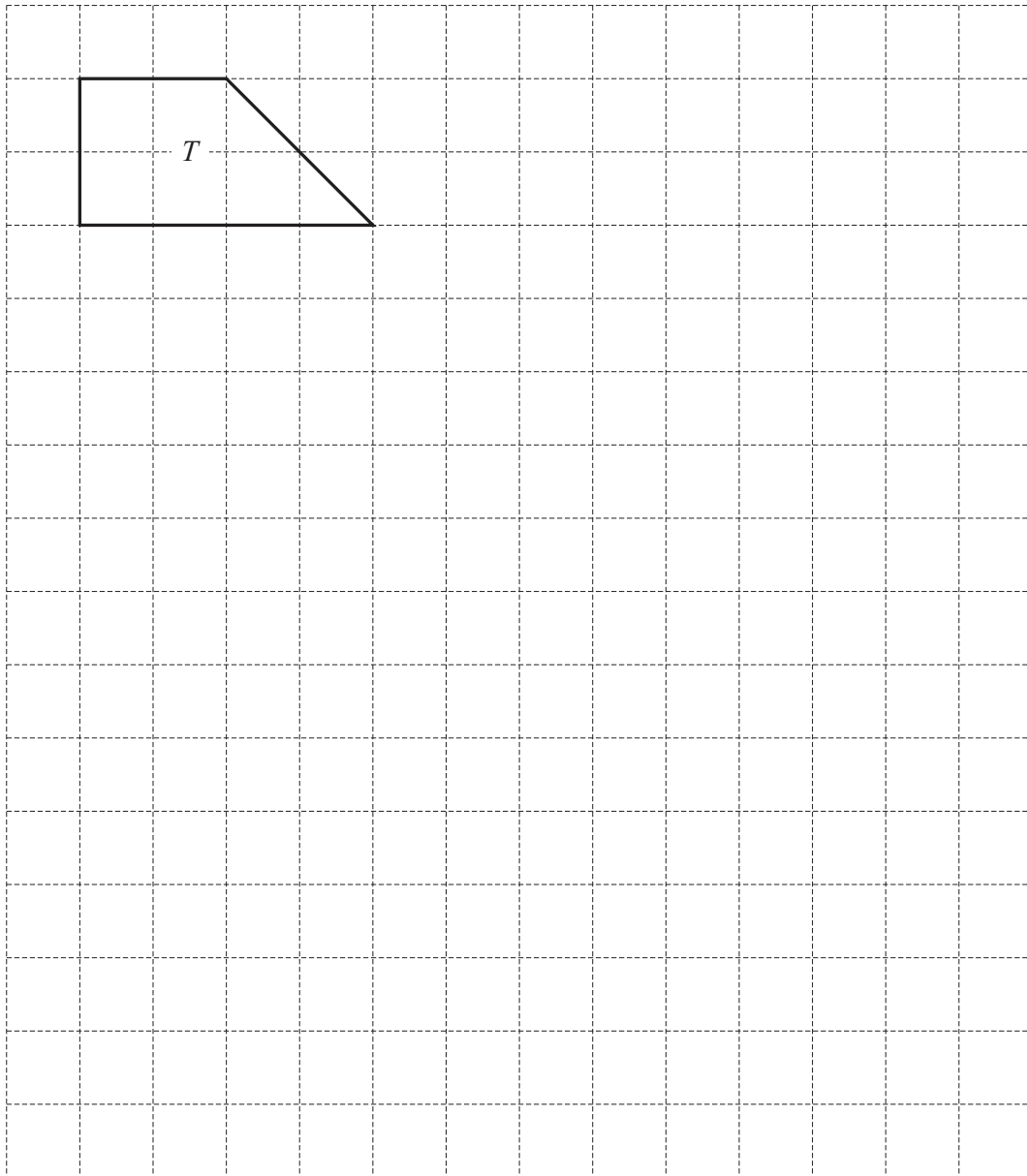
When the net is folded, there are two other points that meet at X.

On the diagram, mark each of these two points with an X.

[2]



- 13 A trapezium, T , is drawn on the 1cm^2 grid.



On the grid, draw

- (a) a different trapezium that is mathematically similar to trapezium T [1]
- (b) a rectangle with the same area as trapezium T . [2]



- 14 The total number of apples and oranges in a bowl is 20.
The ratio apples : oranges = 7 : 3.

Work out the number of apples.

..... [2]

- 15 Write down two geometrical properties of a parallelogram.

1

2 [2]

- 16 Find the value of the reciprocal of 0.8 .

..... [2]

- 17 (a) Two of the angles in a triangle are 100° and 30° .

Work out the size of the third angle.

..... [1]

- (b) Work out the size of an interior angle of a regular 10-sided polygon.

..... [2]



18 (a) Simplify.

$$3x - 2y + 5x + 7y$$

..... [2]

(b) Expand the brackets and simplify.

$$(3x + 5)(x - 7)$$

..... [2]

19 Line L has the equation $y = 3x + 7$.

(a) Write down the gradient of line L .

..... [1]

(b) Point P and point W lie on line L .

P has coordinates $(4, p)$ and W has coordinates $(w, -11)$.

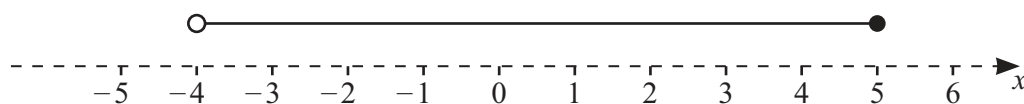
(i) Work out the value of p .

$p =$ [1]

(ii) Work out the value of w .

$w =$ [2]

20 Write down the inequality represented on the number line.



..... [2]



- 21 These are the first four diagrams in a sequence.
The diagrams are made using grey squares and white squares.



diagram 1

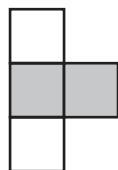


diagram 2

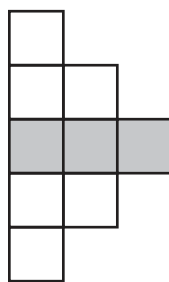


diagram 3

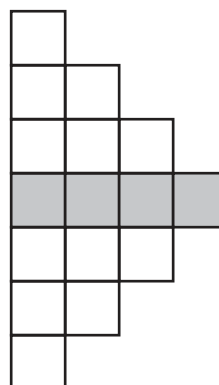
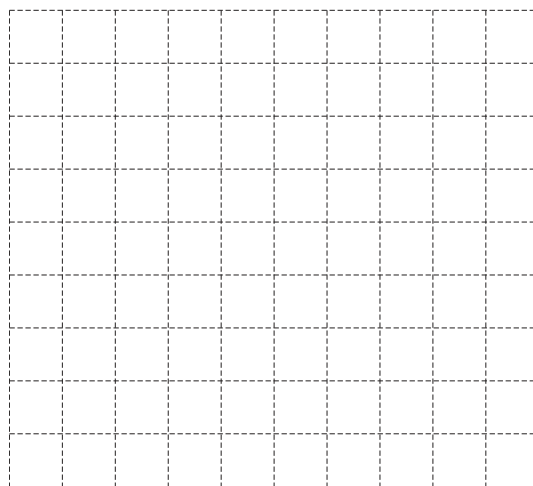


diagram 4

(a)



Draw diagram 5 on the grid.

[1]

- (b) Complete the table for diagram 4 and diagram n .

diagram	1	2	3	4		n
number of grey squares	1	2	3			
number of white squares	0	2	6			$n(n-1)$
total number of squares	1	4	9			

[4]

- (c) Complete this statement.

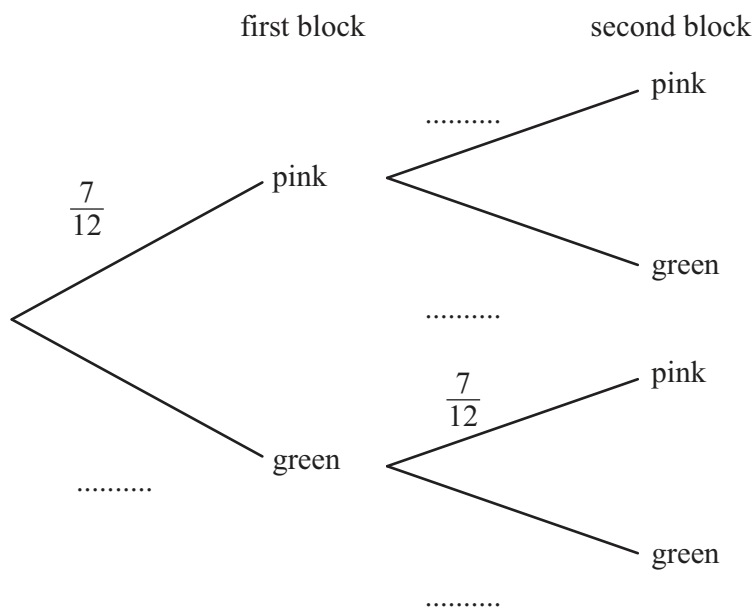
A diagram in this sequence can **not** have a total number of 120 squares because

..... [1]



- 22 A bag contains 7 pink blocks and 5 green blocks.
Kay picks a block at random, notes its colour and puts it back in the bag.
She does this a second time.

(a) Complete the tree diagram.



[2]

(b) Use the tree diagram to work out the probability that the two blocks are green.

..... [2]



- 23 The circumference of a circle is 18π cm.

Work out the radius of the circle.

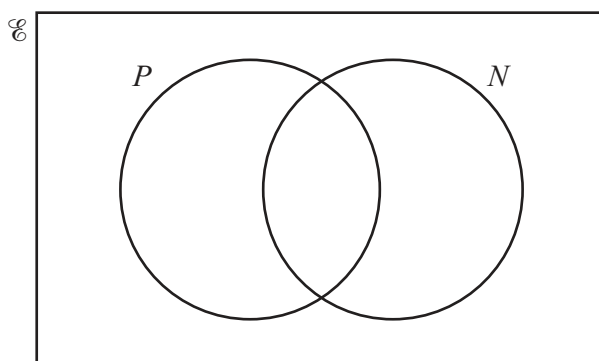
..... cm [2]

- 24 A group of 4 children have a mean age of 11.
A fifth child joins the group, and the mean age is now 10.

Calculate the age of the fifth child.

..... years [3]

- 25 $\mathcal{E} = \{1, 2, 3, 4, 5, 6, 7, 8, 9\}$
 $P = \{\text{prime numbers}\}$
 $N = \{\text{odd numbers}\}$



- (a) Complete the Venn diagram.

[2]

- (b) Write down $n(P \cup N)$.

..... [1]





26 Write these numbers in standard form.

(a) 6320

..... [1]

(b) 0.0258

..... [1]

27 Work out $3\frac{1}{3} - 1\frac{3}{4}$.

Give your answer as a mixed number in its simplest form.

..... [3]

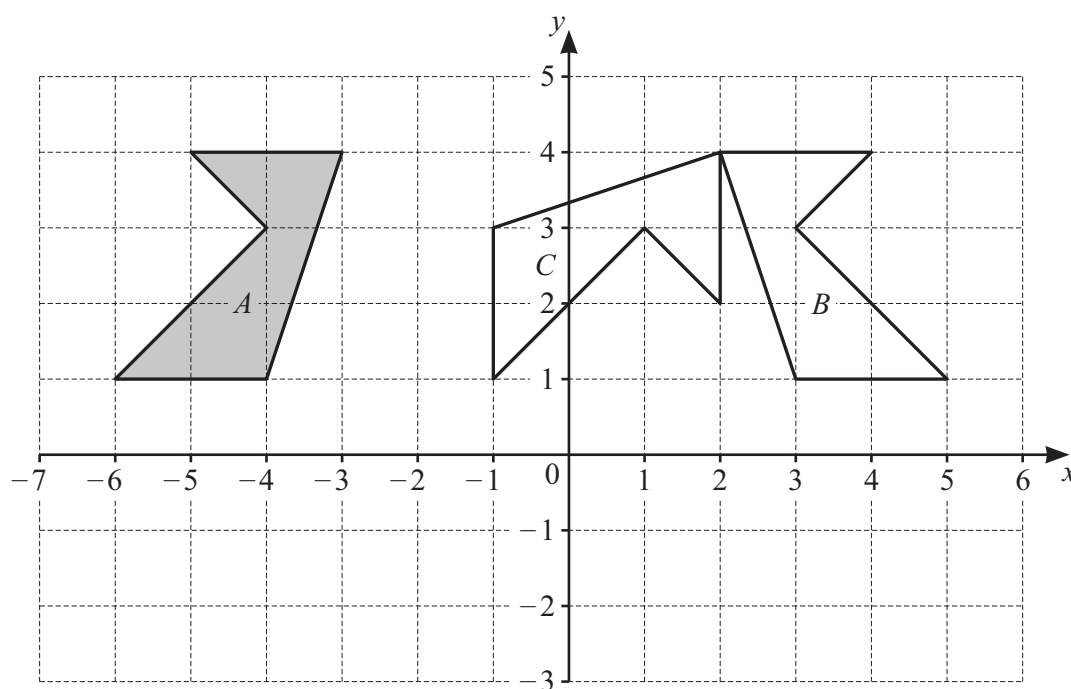
28 Make T the subject of the formula.

$$Q = 3 - 4T$$

$T =$ [2]



29 The diagram shows three shapes, A , B and C , on a grid.



(a) Describe fully the **single** transformation that maps

(i) shape A onto shape B

.....
 [2]

(ii) shape B onto shape C .

.....
 [3]

(b) On the grid, draw the image of shape A after a translation by the vector $\begin{pmatrix} 1 \\ -3 \end{pmatrix}$. [2]



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