

**Cambridge IGCSE™**CANDIDATE
NAMECENTRE
NUMBER

--	--	--	--	--

CANDIDATE
NUMBER

--	--	--	--

MATHEMATICS**0580/11**

Paper 1 Non-calculator (Core)

May/June 2025**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 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.

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 (a) Write the number 10 069 in words.

..... [1]

- (b) Write 10 069 correct to the nearest ten.

..... [1]

- (c) Convert 10 069 centimetres into metres.

..... m [1]

- 2 A bag of sweets costs \$0.34 .
Arun buys 10 bags of sweets.

Work out how much change he receives from \$5.

\$ [2]

- 3 Two numbers have a sum of -2 and a product of -15 .

Work out the two numbers.

..... and [2]





7	27	39	49	99	112
---	----	----	----	----	-----

From the list of numbers, write down

(a) an even number

..... [1]

(b) a square number

..... [1]

(c) a factor of 56

..... [1]

(d) a prime number.

..... [1]

5 Write down the reciprocal of 5.

..... [1]

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

(a) $7 - 5 \times 4 + 8 = 16$ [1]

(b) $7 - 5 \times 4 + 8 = -21$ [1]



- 7 (a) A ticket costs \$18.

Write down an expression, in dollars, for the cost of t tickets.

\$ [1]

- (b) A bag contains n red balls and 16 green balls.

Write down an expression for the total number of balls in the bag.

..... [1]

- 8 (a) Write 90% as a fraction in its simplest form.

..... [1]

- (b) Write $\frac{3}{100}$ as a decimal.

..... [1]

- 9 (a) These are the first four terms of a sequence.

33 26 19 12

- (i) Write down the term-to-term rule for this sequence.

..... [1]

- (ii) Work out the next two terms in this sequence.

....., [2]

- (b) These are the first four terms of another sequence.

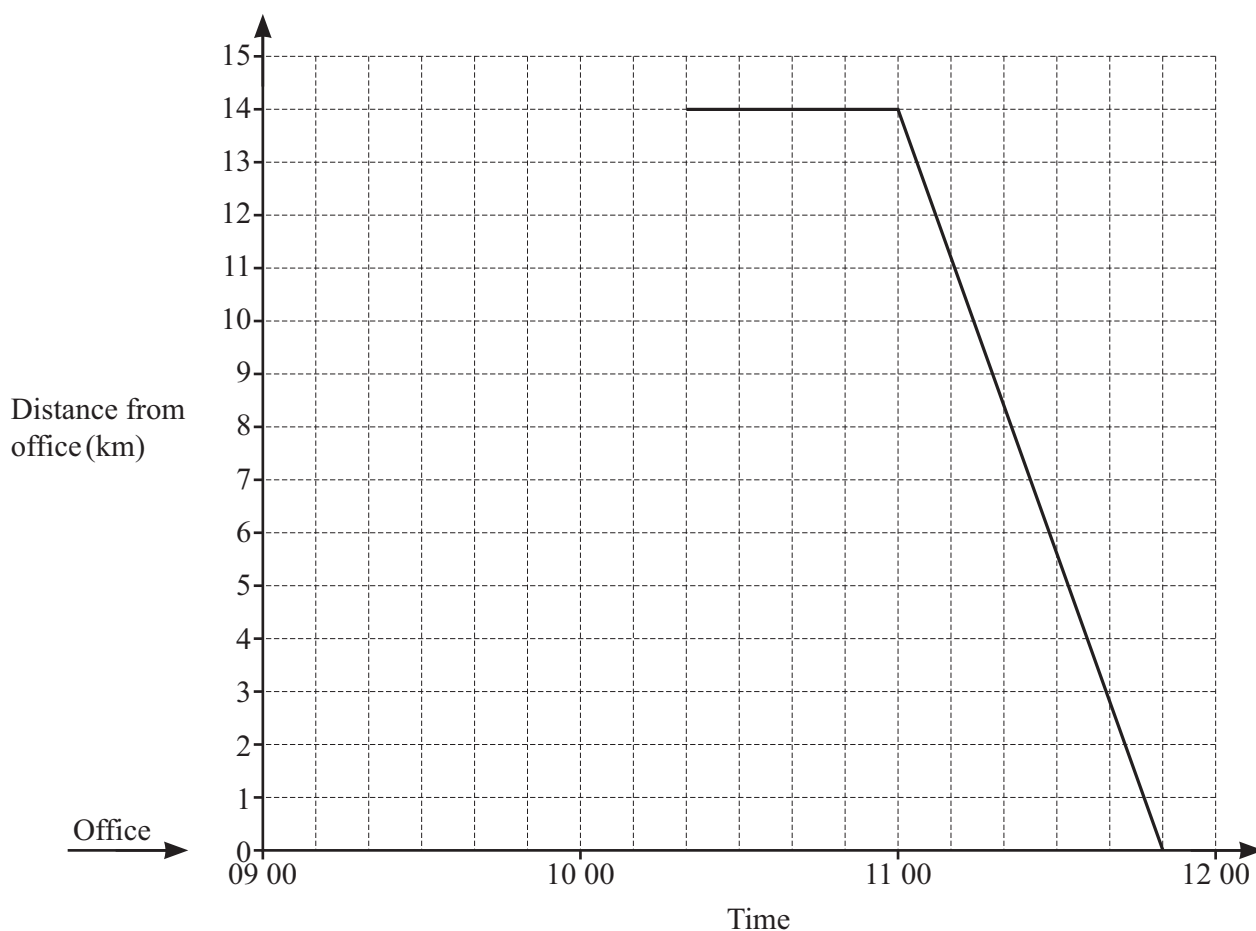
19 23 27 31

Find the n th term.

..... [2]



- 10 Ky cycles from his office to a meeting and back again.
The travel graph shows his time at the meeting and his journey back.



- (a) How far is the meeting from his office?

..... km [1]

- (b) How long is Ky at the meeting for?

..... min [1]

- (c) Write down the time Ky arrives back at his office after the meeting.

..... [1]

- (d) Ky cycles from his office to the meeting at a constant speed of 21 km/h.

Complete the travel graph.

[2]



- 11 Calculate the volume of a cube with side length 3 cm.

..... cm^3 [1]

- 12 Solve.

$$5x + 8 = 3x - 2$$

$x =$ [2]

- 13 Work out.

(a) -5×-4

..... [1]

(b) $-8 + (-3)$

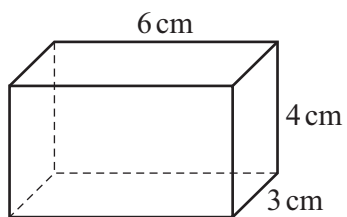
..... [1]

14 $3^p \times 3^4 = 3^{10}$

Find the value of p .

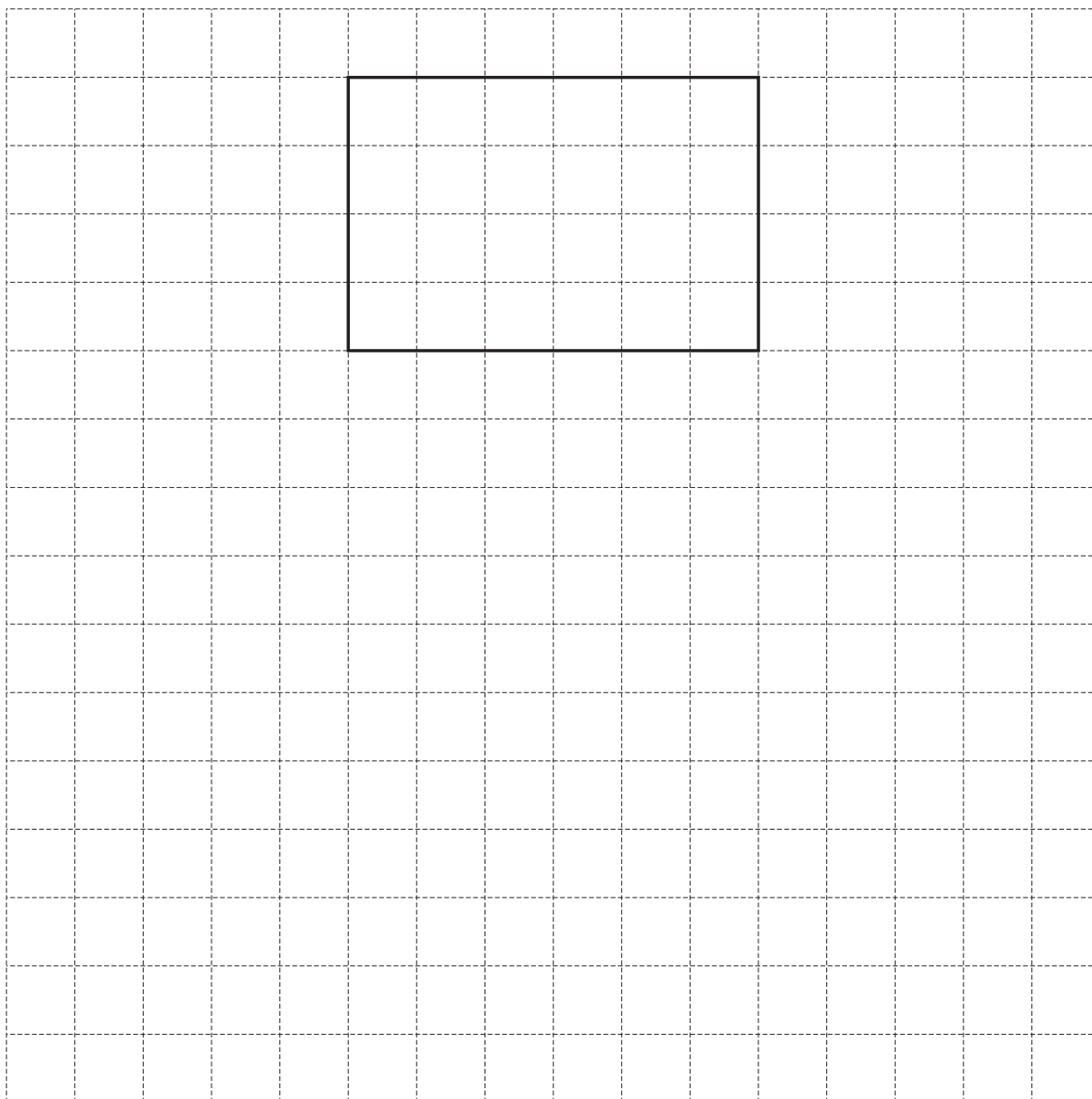
$p =$ [1]





NOT TO
SCALE

Complete a net of this cuboid on the 1 cm^2 grid.
One face has been drawn for you.



[3]



16 (a) Simplify.

$$6a + 4b - a - 5b$$

..... [2]

(b) Factorise.

(i) $6x + 15y$

..... [1]

(ii) $x^2y - 5xy$

..... [2]

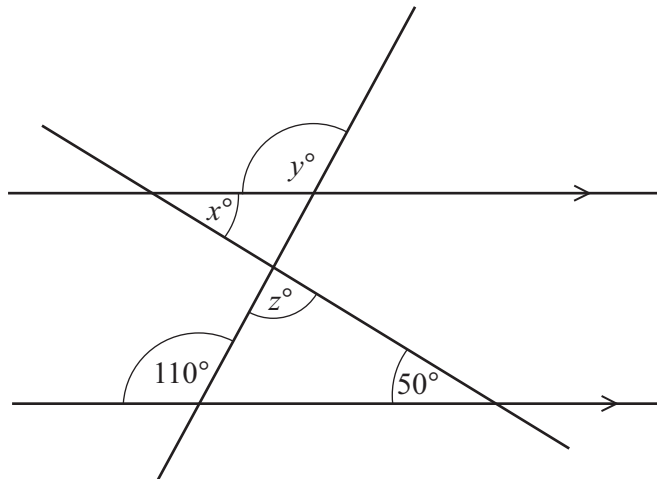
17 By writing each number in the calculation correct to 1 significant figure, find an estimate for the value of

$$\frac{42.8 + 17.4}{1.97 \times 5.79}.$$

..... [2]



- 18 The diagram shows two straight lines intersecting two parallel lines.



NOT TO
SCALE

- (a) Find the value of x .
Give a geometrical reason for your answer.

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

- (b) Find the value of y .
Give a geometrical reason for your answer.

$y = \dots\dots\dots$ because $\dots\dots\dots$
 $\dots\dots\dots$ [2]

- (c) Find the value of z .

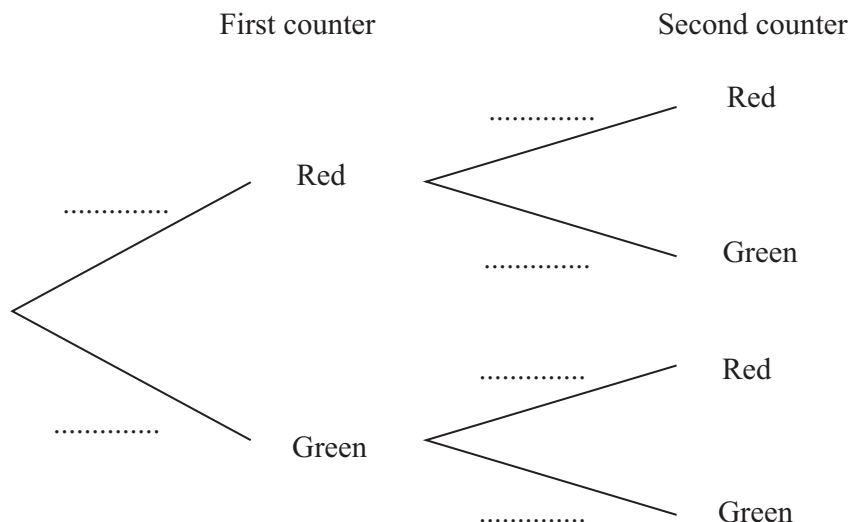
$z = \dots\dots\dots$ [2]





- 19 A box contains 10 counters.
The counters are either red or green.
The ratio red counters : green counters = 1 : 4.

Shareen picks a counter at random, notes its colour and puts it back in the box.
She then picks a second counter at random.



- (a) Complete the tree diagram.

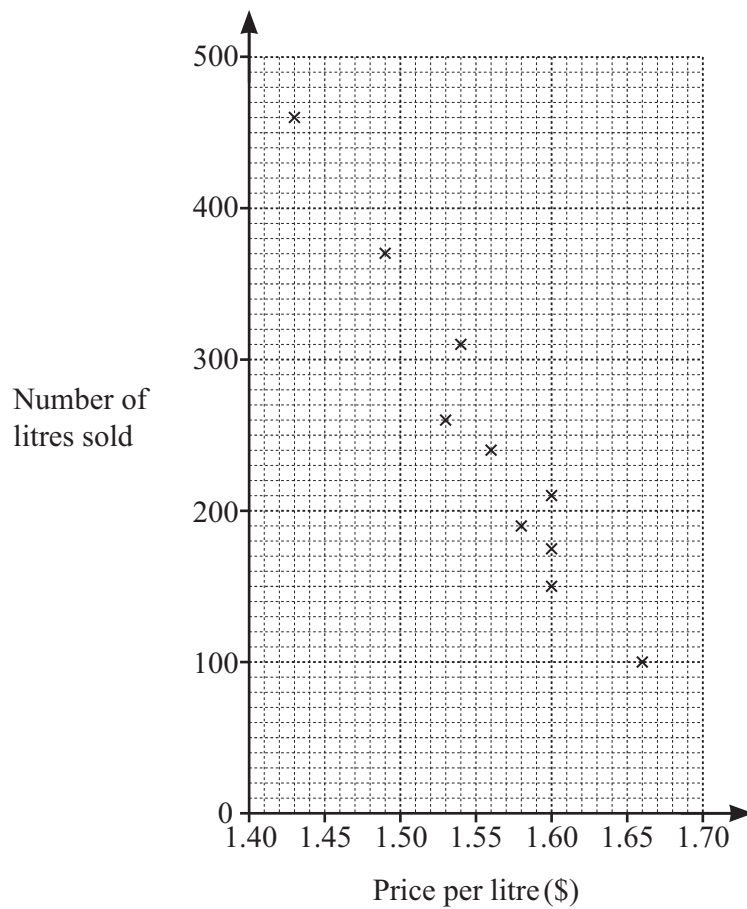
[3]

- (b) Find the probability that both counters are green.

..... [2]



- 20 The scatter diagram shows the price of petrol per litre and the number of litres sold at a petrol station on each of ten days.



- (a) These are the results for two more days.

Price per litre (\$)	1.68	1.47
Number of litres sold	90	380

Plot this information on the scatter diagram.

[1]

- (b) What type of correlation is shown in the scatter diagram?

..... [1]

- (c) (i) On the scatter diagram, draw a line of best fit.

[1]

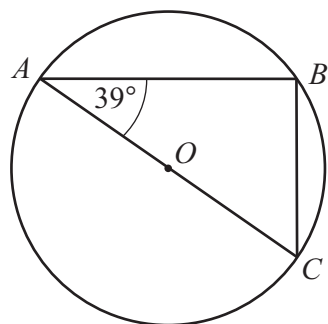
- (ii) One day the price of petrol was \$1.55 per litre.

Use your line of best fit to estimate the number of litres sold.

..... litres [1]



- 21 Points A , B and C lie on the circle, centre O .



NOT TO
SCALE

Work out angle BCA .

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

- 22 $A = 2^3 \times 3$ $B = 3^2 \times 5$

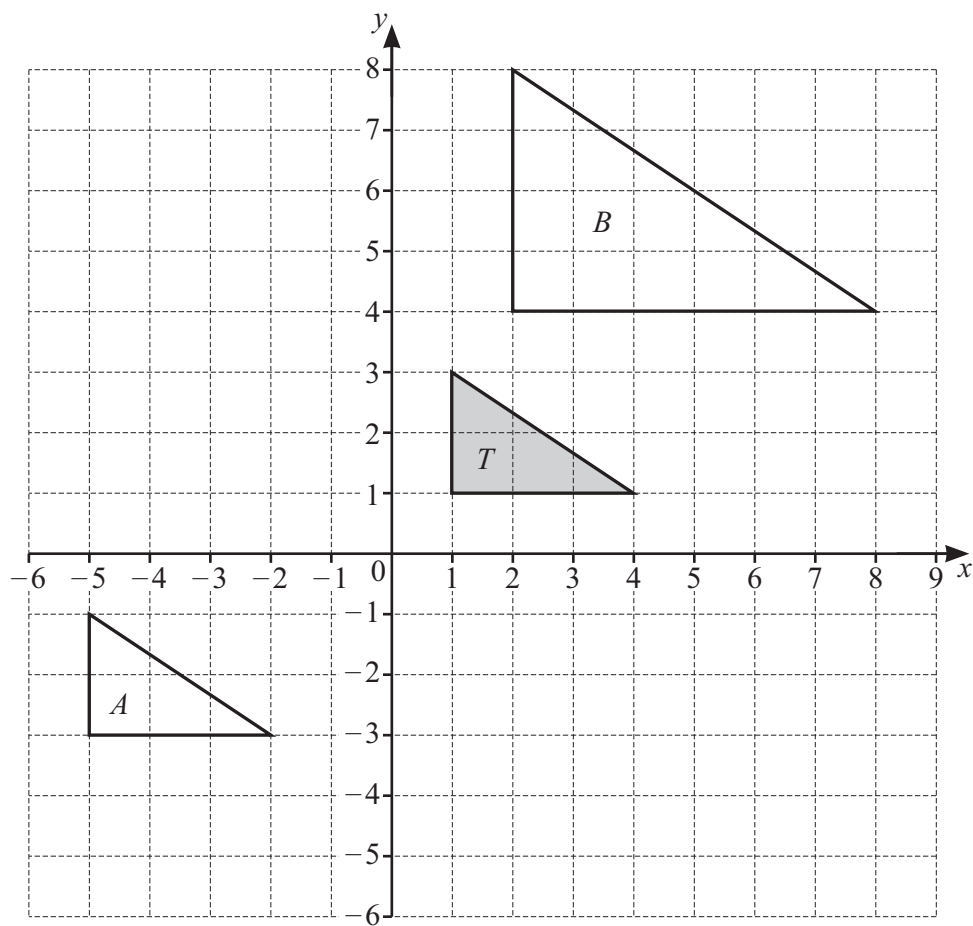
- (a) Find the highest common factor (HCF) of A and B .

$\dots\dots\dots$ [1]

- (b) Find the lowest common multiple (LCM) of A and B .

$\dots\dots\dots$ [2]





(a) On the grid, draw the image of triangle T after a rotation, 90° clockwise, centre $(0, 0)$. [2]

(b) Describe fully the **single** transformation that maps triangle T onto triangle A . [2]

.....

.....

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

.....

.....



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

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

..... [3]

- 25 (a) Write 32 500 in standard form.

..... [1]

- (b) Write 5.6×10^{-3} as an ordinary number.

..... [1]

Question 26 is printed on the next page.





26 Solve the simultaneous equations.

$$2x + 5y = 5$$

$$3x + 4y = 11$$

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

$$y = \dots\dots\dots [4]$$

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 (UCLES) 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 the Cambridge Assessment International Education 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 Assessment International Education is part of Cambridge Assessment. Cambridge Assessment is the brand name of the University of Cambridge Local Examinations Syndicate (UCLES), which is a department of the University of Cambridge.

