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CAMBRIDGE INTERNATIONAL MATHEMATICS

0607/13

Paper 1 Non-calculator (Core)

May/June 2025

1 hour 15 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. You will be given marks for correct methods even if your answer is incorrect.

INFORMATION

- The total mark for this paper is 60.
- The number of marks for each question or part question is shown in brackets [].

This document has **12** 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 these numbers in order of size, starting with the smallest.

0.506 0.65 0.065 0.6 0.56

.....,,, [2]
smallest

- (b) Write 0.6 as a percentage.

.....% [1]

- (c) Write 0.56 as a fraction in its simplest form.

..... [2]

- 2 (a) Write 2780 correct to the nearest 100.

..... [1]

- (b) Write 2780 in standard form.

..... [1]



3 Sophie records the lowest temperature, in $^{\circ}\text{C}$, each day during one week.

4 6 6 7 9 11 13

(a) Work out the range.

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

(b) Find the median.

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

(c) Work out the mean.

..... $^{\circ}\text{C}$ [2]

4 These are the first 5 terms of a sequence.

2 6 10 14 18

(a) Write down the next term in this sequence.

..... [1]

(b) Find an expression for the n th term of this sequence.

..... [2]



5 At a cinema the cost of an adult ticket is \$8 and the cost of a child ticket is \$6.50 .

- (a) Liu buys 2 adult tickets and 3 child tickets.

Find the change from \$50.

\$ [3]

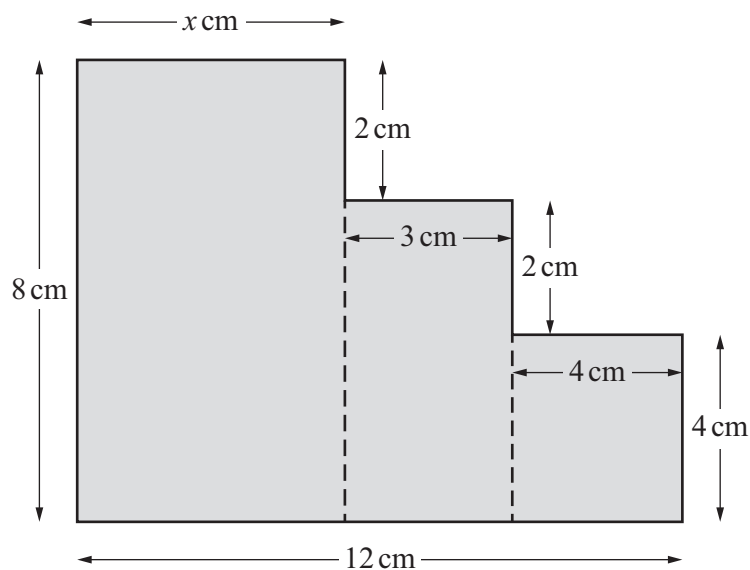
- (b) Chris pays \$66 for 4 child tickets and some adult tickets.

Work out how many adult tickets she buys.

..... [2]



6 This shape is made using 3 rectangles.



NOT TO
SCALE

(a) Show that $x = 5$.

[1]

(b) Find the perimeter of the shape.

..... cm [1]

(c) Find the total area of the shape.

..... cm^2 [3]





7 $T = 3x - 4y$

(a) Find the value of T when $x = 5$ and $y = -2$.

$T =$ [2]

(b) Rearrange the formula to make x the subject.

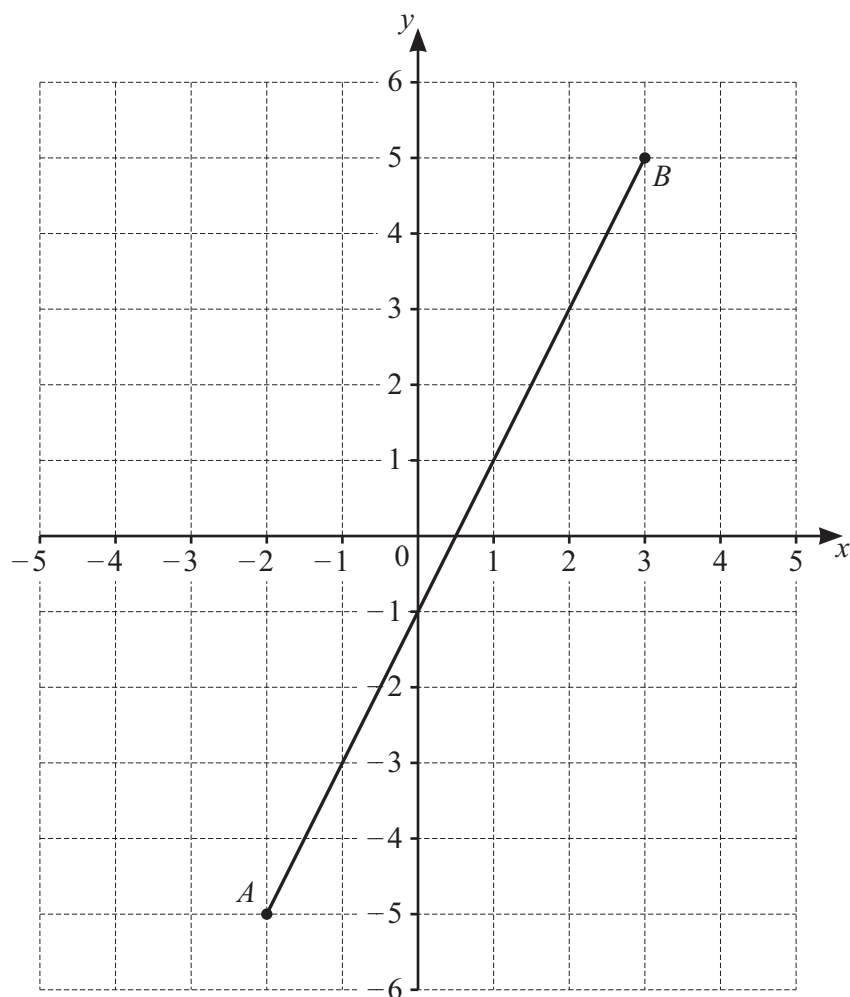
$x =$ [2]

8 Divide \$135 in the ratio 5 : 4.

\$ [2]

\$ [2]





The line AB is drawn on a square grid.

(a) Write down the coordinates of point A and point B .

A (..... ,)

B (..... ,) [2]

(b) Find the coordinates of the midpoint of the line AB .

(..... ,) [1]

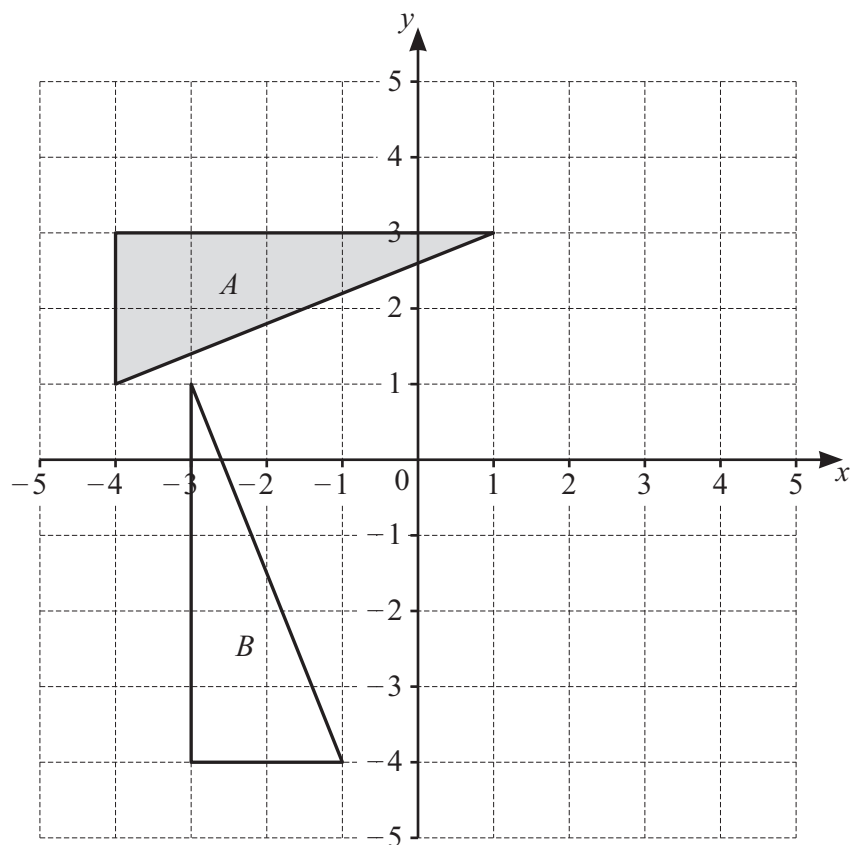
(c) Work out the gradient of the line AB .

..... [2]

(d) Find the equation of the line AB .

..... [2]





- (a) Describe fully the **single** transformation which maps triangle A onto triangle B .

.....
 [3]

- (b) Translate triangle A by the vector $\begin{pmatrix} 3 \\ -4 \end{pmatrix}$.

[2]



- 11 Sajid drives 10 km at a speed of 20 km/h.
He then drives 200 km at a speed of 80 km/h.

(a) Show that Sajid takes $\frac{1}{2}$ hour to drive the first 10 km.

[1]

(b) Work out his average speed for the whole journey.

..... km/h [4]

- 12 (a) Simplify.

$$3x + 5x - 7x$$

..... [1]

(b) Expand and simplify.

$$2(x + 3) + 3(x + 1)$$

..... [2]

(c) Simplify.

$$15x^6 \div 3x^2$$

..... [2]



13 (a) Write 60 as a product of its prime factors.

..... [2]

(b) Find the lowest common multiple (LCM) of 60 and 24.

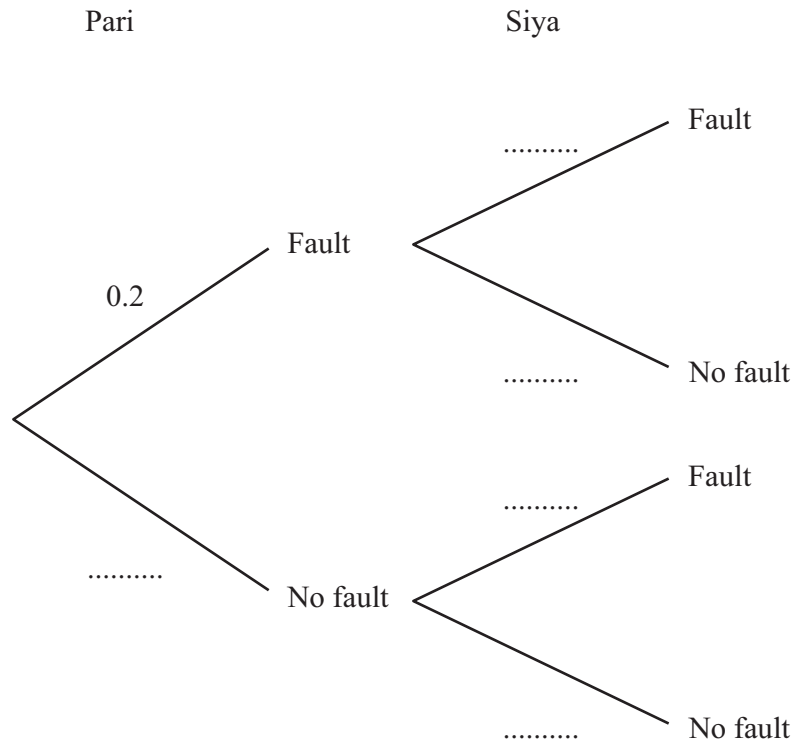
..... [2]

Question 14 is printed on the next page.



- 14** The probability that a new phone has a fault in the first year of use is 0.2 .
Pari and Siya each buy a new phone.

(a) Complete this tree diagram.



[2]

- (b)** Find the probability that both Pari and Siya have no fault on their phones in the first year.

..... [2]

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