



# Cambridge IGCSE™

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**CAMBRIDGE INTERNATIONAL MATHEMATICS**

**0607/13**

Paper 1 (Core)

**May/June 2024**

**45 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 and you will be given marks for correct methods even if your answer is incorrect.
- All answers should be given in their simplest form.

## INFORMATION

- The total mark for this paper is 40.
- The number of marks for each question or part question is shown in brackets [ ].

This document has **8** pages.

**Formula List**

Area,  $A$ , of triangle, base  $b$ , height  $h$ .  $A = \frac{1}{2}bh$

Area,  $A$ , of circle, radius  $r$ .  $A = \pi r^2$

Circumference,  $C$ , of circle, 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  $l$ .  $A = \pi rl$

Curved 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  $h$ .  $V = \frac{1}{3}Ah$

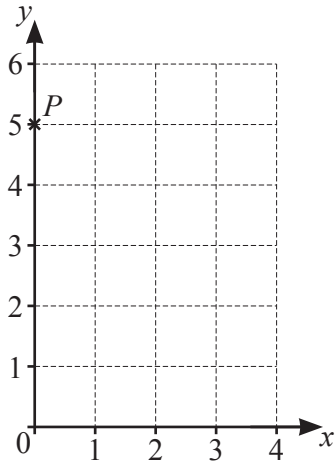
Volume,  $V$ , of cylinder of radius  $r$ , height  $h$ .  $V = \pi r^2 h$

Volume,  $V$ , of cone of radius  $r$ , height  $h$ .  $V = \frac{1}{3}\pi r^2 h$

Volume,  $V$ , of sphere of radius  $r$ .  $V = \frac{4}{3}\pi r^3$

Answer **all** the questions.

1



Write down the coordinates of point *P*.

( ..... , ..... ) [1]

2 Change 5 litres into millilitres.

..... ml [1]

3 Write down the number of lines of symmetry for a rectangle.

..... [1]

4 Write down a prime number less than 10.

..... [1]

5 Complete the bicycle repair bill.

Item	Item cost (\$)	Number of items	Total cost (\$)
Tyre	5.25	2	
Brake pads		2	36
		Total cost (\$)	

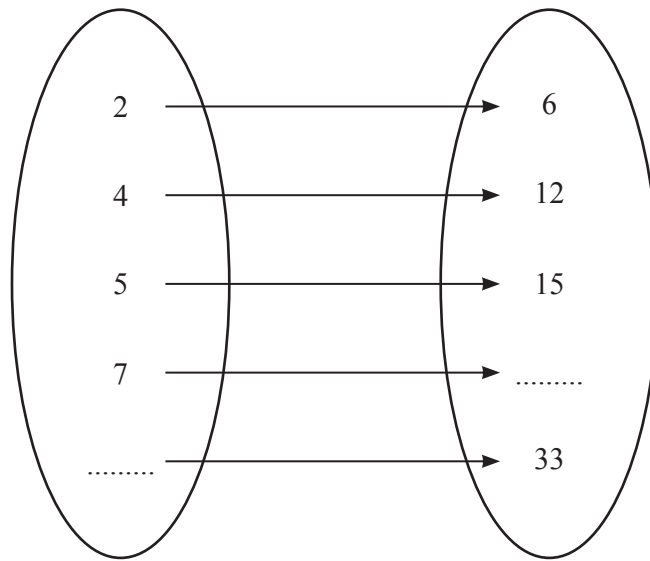
[2]

6 A film starts at 18 35 and finishes at 20 50.

Work out how long the film lasts.  
Give your answer in hours and minutes.

..... h ..... min [2]

7 Complete the mapping diagram.



[2]

8 These are the ages in years of 12 cats.

7    3    6    3    10    2    5    6    9    8    3    2

(a) Find the median.

.....years [2]

(b) Find the mode.

.....years [1]

9  $P = x^2 - 2x$

Find  $P$  when  $x = -3$ .

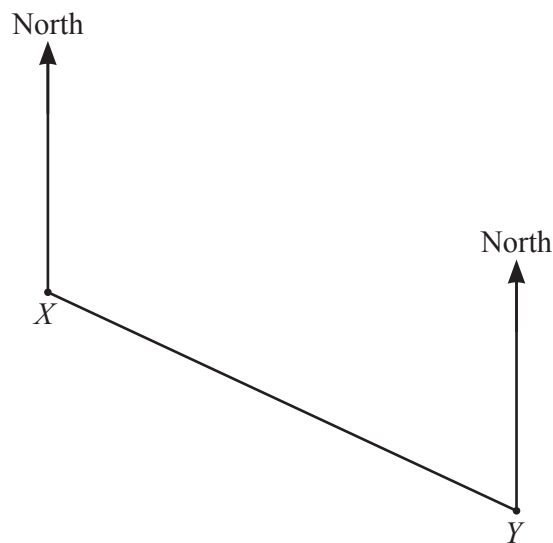
$P = \dots\dots\dots$  [2]

10 A bag contains 12 blue pencils and 48 red pencils.

Work out the percentage of pencils in the bag that are blue.

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

11



Measure the bearing of  $Y$  from  $X$ .

$\dots\dots\dots$  [1]

12 Write down all the integer values of  $x$  that satisfy this inequality.

$$-3 < x \leq 3$$

$\dots\dots\dots$  [2]

13 Work out.

$$\frac{4}{5} - \frac{3}{8}$$

..... [2]

14 A map has a scale of 1 : 4000.  
On the map, the distance between two houses is 7 cm.

Work out the actual distance between the houses.  
Give your answer in metres.

..... m [2]

15 The area of a circle is  $49\pi \text{ m}^2$ .

Work out the radius of the circle.

..... m [2]

16 Work out the size of one interior angle of a regular 12-sided polygon.

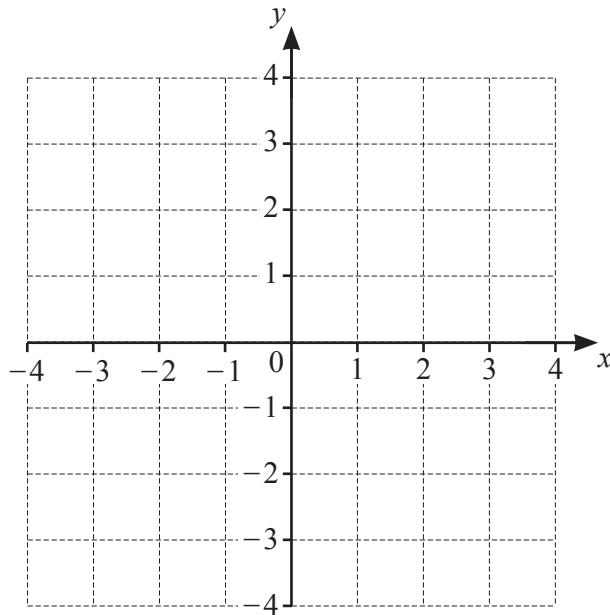
..... [3]

17 Sammy cycles 12 km in 45 minutes.

Find his average speed in km/h.

..... km/h [2]

18

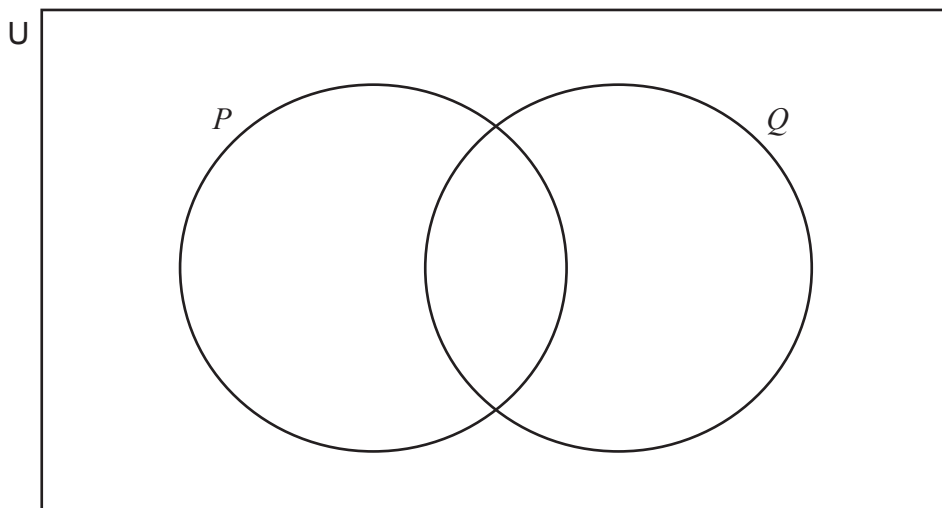


On the grid, draw the line  $y = x + 2$ .

[2]

- 19  $U = \{a, b, c, d, e, h, i, m, r, s, t, v, y\}$   
 $P = \{c, h, e, m, i, s, t, r, y\}$   
 $Q = \{m, a, t, h, s\}$

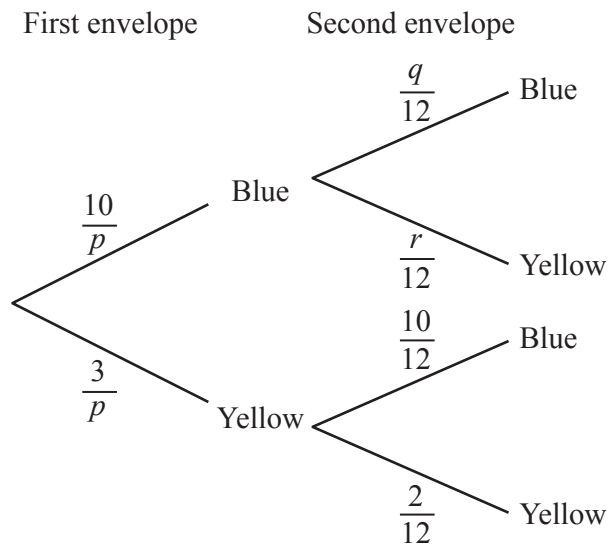
Complete the Venn diagram by writing each element in the correct region.



[2]

Questions 20 and 21 are printed on the next page.

- 20 A sack contains 10 blue envelopes and 3 yellow envelopes.  
Two envelopes are chosen from the sack at random.



Write down the values of  $p$ ,  $q$  and  $r$ .

$p =$  .....

$q =$  .....

$r =$  ..... [2]

- 21 Solve the simultaneous equations.

$$5x + y = 5$$

$$x + 2y = -17$$

$x =$  .....

$y =$  ..... [3]

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