



# Cambridge IGCSE™

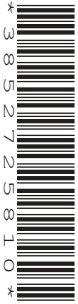
CANDIDATE  
NAME

CENTRE  
NUMBER

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**CAMBRIDGE INTERNATIONAL MATHEMATICS**

**0607/12**

Paper 1 (Core)

**October/November 2020**

**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 **12** pages. Blank pages are indicated.

**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 Work out.  
 $-3 + 5$

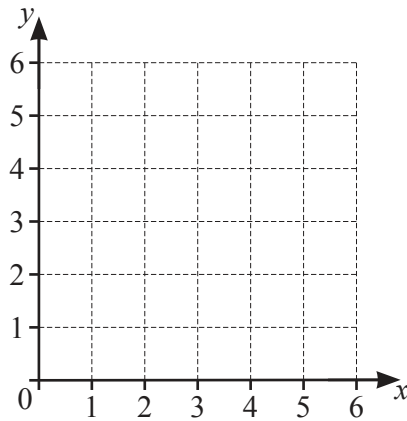
..... [1]

- 2                                    27      32      35      36      39      42

From the list, write down the square number.

..... [1]

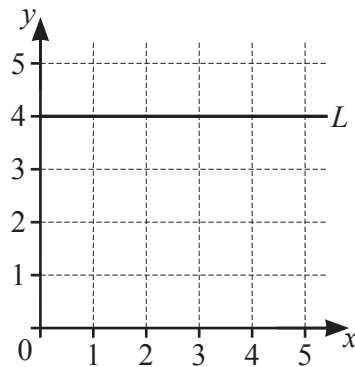
- 3 (a)



On the grid, plot the point (5, 3).

[1]

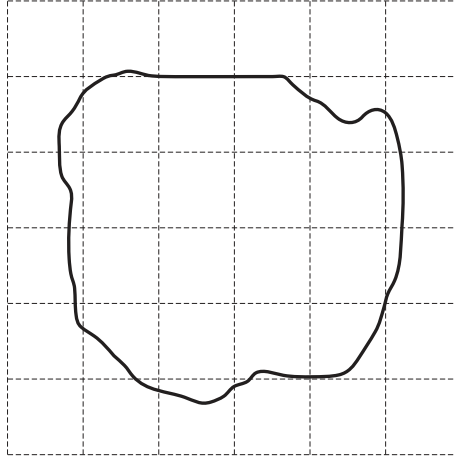
- (b)



Write down the coordinates of any point on the straight line,  $L$ .

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

4



The diagram shows a shape on a  $1 \text{ cm}^2$  grid.

Estimate the area of this shape.

.....  $\text{cm}^2$  [1]

5 Write  $\frac{3}{10}$  as a decimal.

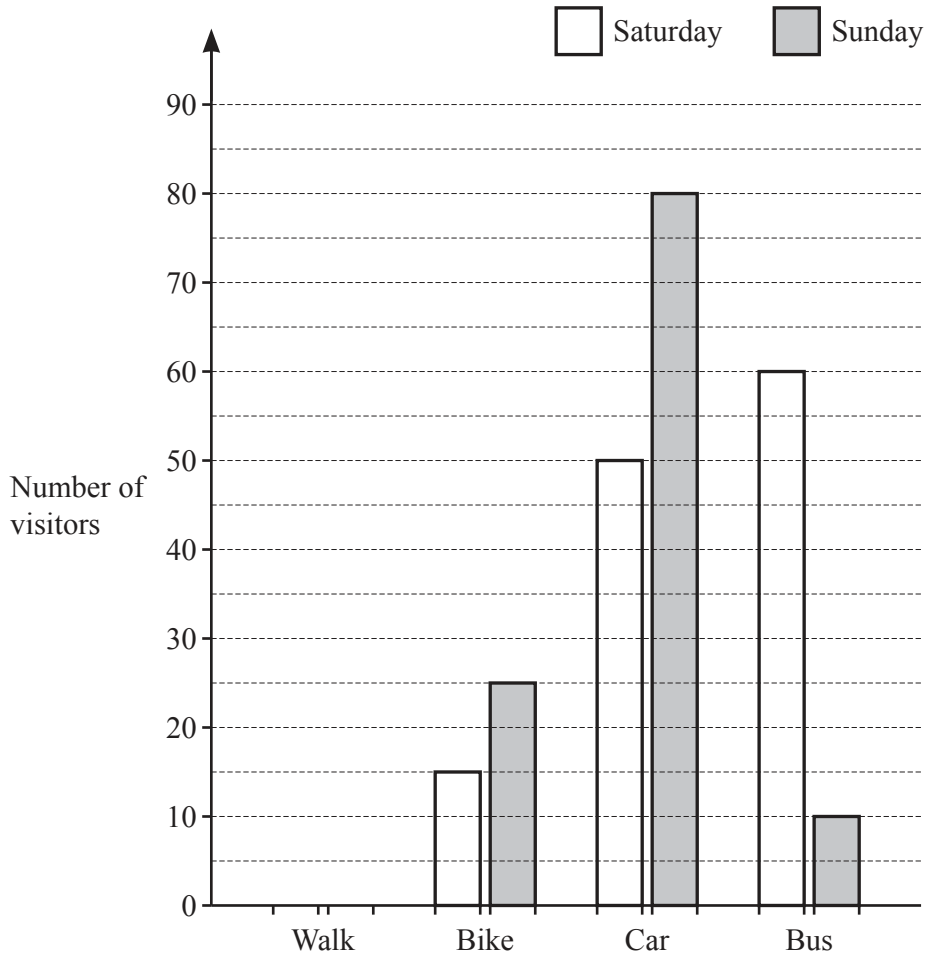
..... [1]

6 Work out  $\frac{3}{11}$  of 77.

..... [1]

7 Insert brackets to make this calculation correct.

$$3 \times 2 + 4 = 18 \quad [1]$$



The bar chart shows some information about the way visitors travel to a museum.

(a) 20 visitors walked on Saturday and 30 visitors walked on Sunday.

Complete the bar chart.

[1]

(b) Find how many more visitors arrived by bus than by car on Saturday.

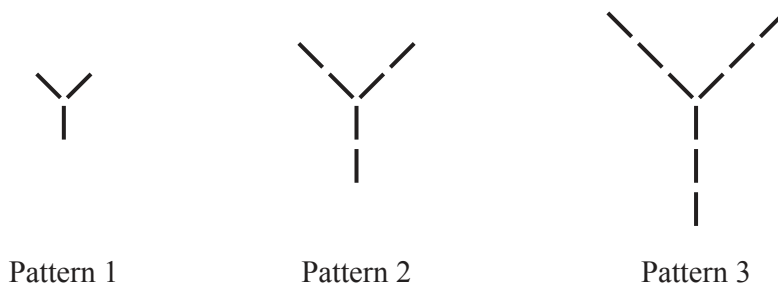
..... [1]

9 The probability that Joanna is late for school is 0.15 .

Find the probability that Joanna is **not** late for school.

..... [1]

10

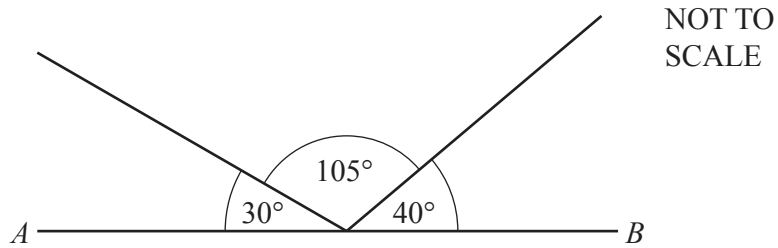


There are 3 rods in Pattern 1.

Write down the number of rods in Pattern 5.

..... [1]

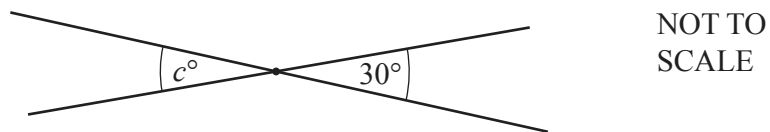
11 (a)



Explain why line  $AB$  cannot be a straight line.

..... [1]

(b)



Complete the statement.

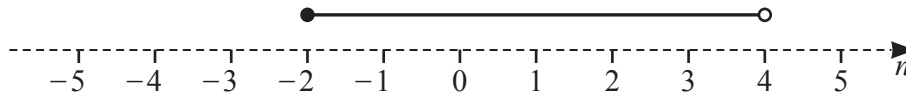
$c =$  ..... because ..... [2]

12 By writing each number correct to 1 significant figure, find an estimate of

$$(6.98 + 3.04) \times 79.92 .$$

..... [2]

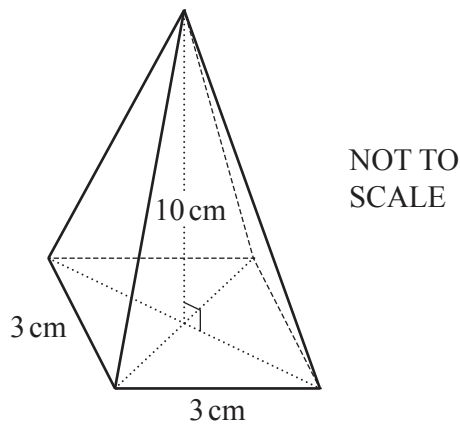
13



Complete the statement using  $<$ ,  $\leq$ ,  $=$ ,  $\geq$  or  $>$ .

This number line shows the inequality  $-2$  .....  $n$  .....  $4$ . [2]

14

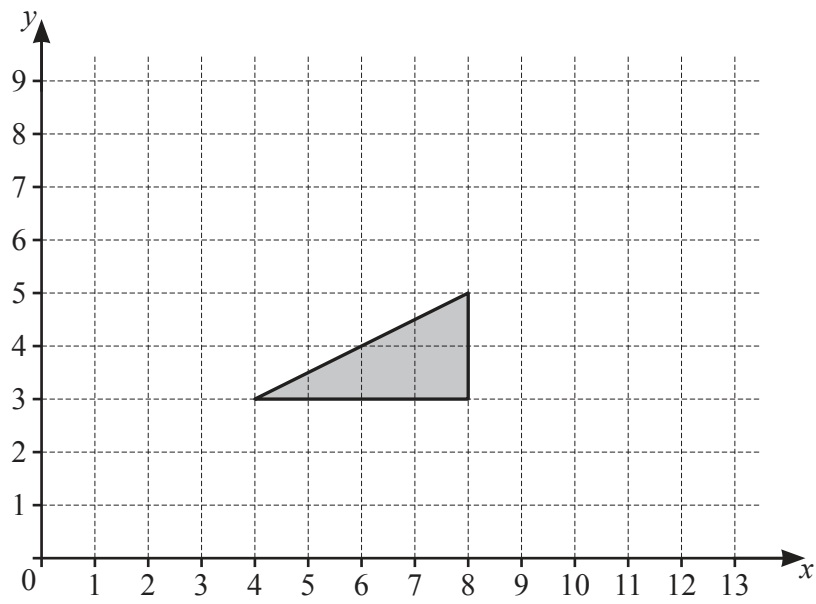


The diagram shows a square-based pyramid of base length 3 cm and vertical height 10 cm.

Calculate the volume of this pyramid.

.....  $\text{cm}^3$  [3]

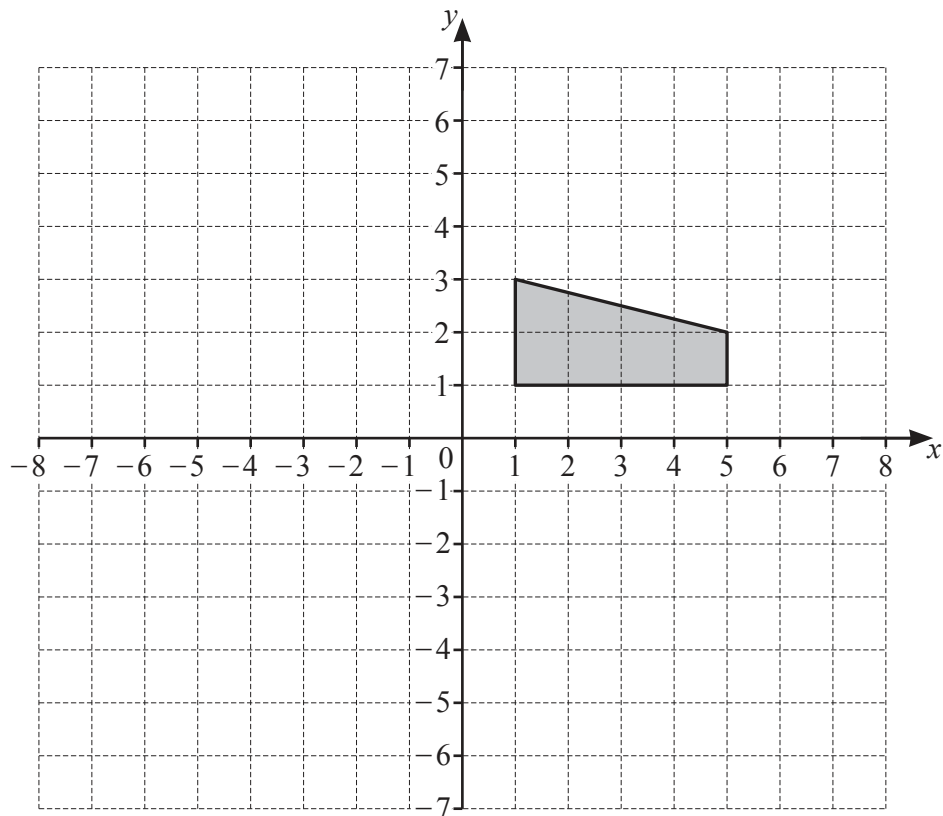
15 (a)



On the grid, translate the triangle by the vector  $\begin{pmatrix} 4 \\ -2 \end{pmatrix}$ .

[2]

(b)

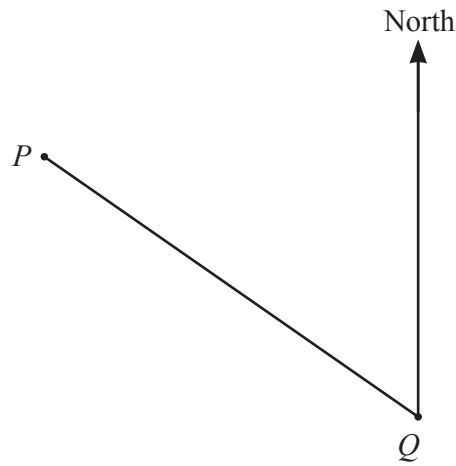


On the grid, enlarge the shape by scale factor 3 about the point (4, 2).

[2]



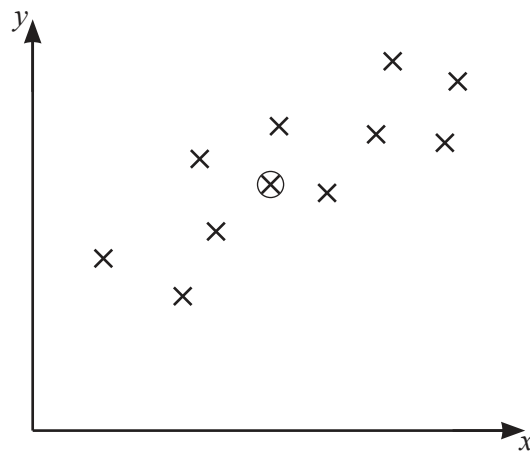
16



Measure the bearing of  $P$  from  $Q$ .

..... [1]

17



The scatter diagram shows 11 crosses.  
 10 of the crosses represent data.  
 The point marked  $\otimes$  is the mean point.

On the grid, draw a line of best fit. [2]

18 Make  $x$  the subject of the formula.

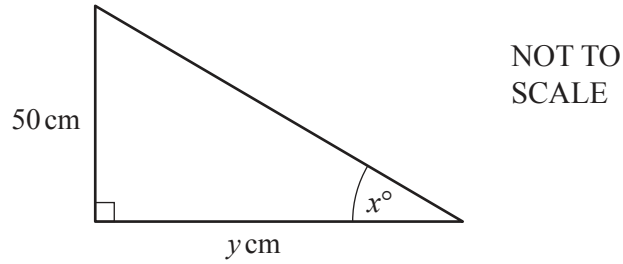
$$y + ax = 5$$

$x =$  ..... [2]

19 Find the highest common factor (HCF) of 15 and 21.

..... [1]

20

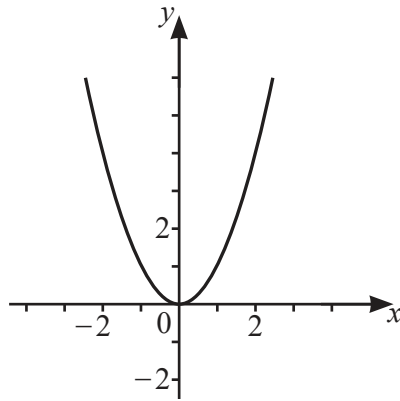


$$\sin x = \frac{5}{13} \quad \cos x = \frac{12}{13} \quad \tan x = \frac{5}{12}$$

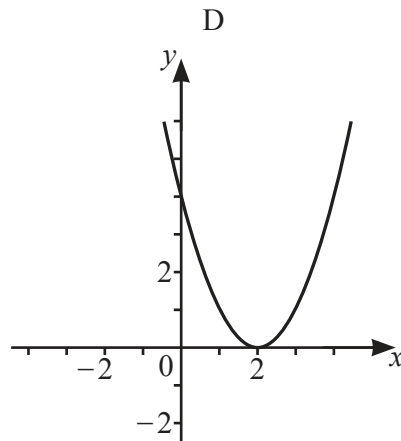
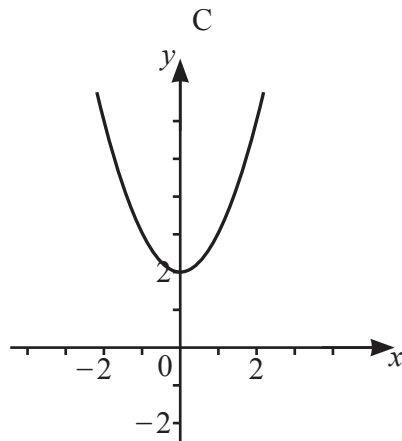
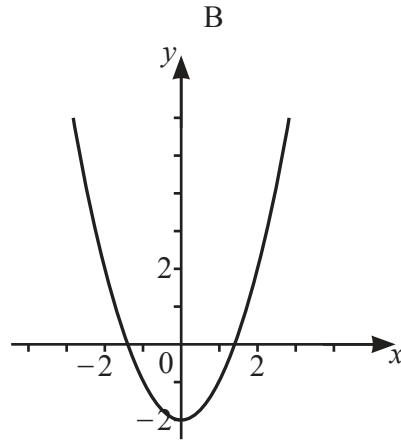
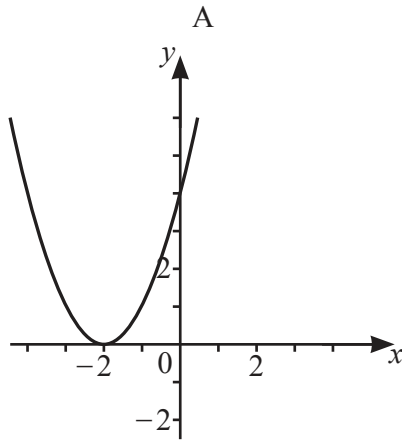
Find the value of  $y$ .

$y =$  ..... [2]

21 The diagram shows the graph of  $y = f(x)$ .



Here are four more graphs, A, B, C and D.



Write down the letter of the graph which shows

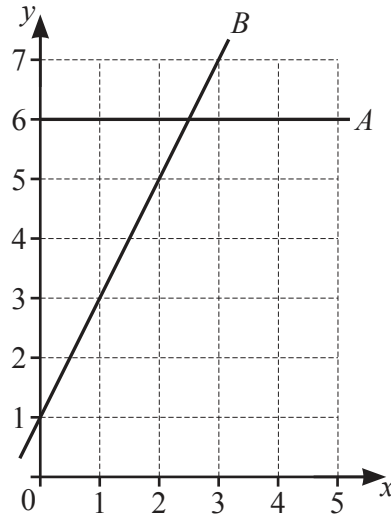
(a)  $y = f(x) + 2$ ,

..... [1]

(b)  $y = f(x+2)$ .

..... [1]

**Question 22 is printed on the next page.**



(a) Write down the equation of line  $A$ .

..... [1]

(b) Find the equation of line  $B$ .

..... [3]

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