

Centre No.					
Candidate No.					

Paper Reference						
<b>5</b>	<b>5</b>	<b>0</b>	<b>1</b>	<b>/</b>	<b>0</b>	<b>1</b>

Surname	Initial(s)
Signature	

Paper Reference(s)

**5501/01**

# Edexcel GCSE

## Mathematics A – 1387

Paper 1 (Non-Calculator)

Foundation Tier

Wednesday 4 June 2003 – Afternoon

Time: 1 hour 30 minutes

Examiner's use only

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Team Leader's use only

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**Materials required for examination**

Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.  
Tracing paper may be used.

**Items included with question papers**

Formulae sheet

**Instructions to Candidates**

In the boxes above, write your centre number, candidate number, your surname, initial(s), and your signature.

Check that you have the correct question paper.

Answer **ALL** the questions in the spaces provided in this question paper.

Supplementary answer sheets may be used.

**Information for Candidates**

The total mark for this paper is 100.

The marks for individual questions and parts of questions are shown in round brackets: e.g. (2).

**Calculators must not be used.**

This paper has 26 questions. There are no blank pages.

**Advice to Candidates**

Show all stages in any calculations.

Work steadily through the paper.

Do not spend too long on one question.

If you cannot answer a question, leave it and attempt the next one.

Return at the end to those you have left out.

Printer's Log. No.

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*Turn over*

**Edexcel**  
Success through qualifications

**Answer ALL TWENTY SIX questions.**  
**Write your answers in the spaces provided.**  
**You must write down all stages in your working.**  
**You must NOT use a calculator.**

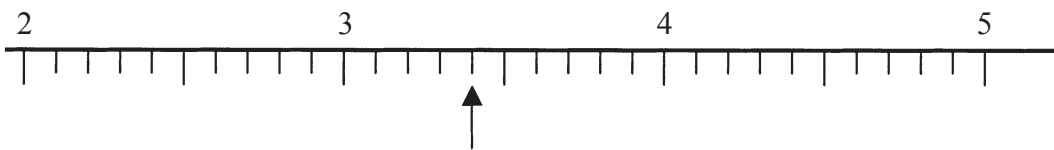
*Leave blank*

1.



(a) Write down the number marked with an arrow.

.....  
(1)



(b) Write down the number marked with an arrow.

.....  
(1)



(c) Find the number 430 on the number line.  
 Mark it with an arrow ( $\uparrow$ ).

(1)



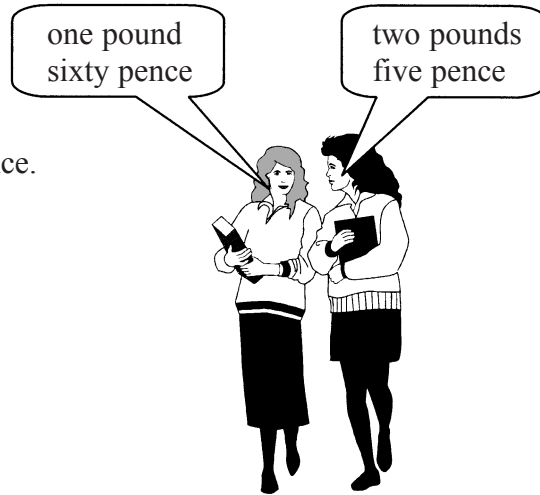
(d) Find the number 3.7 on the number line.  
 Mark it with an arrow ( $\uparrow$ ).

(1)

2. Natasha had one pound sixty pence.

Her friend, Kelly, had two pounds five pence.

Write down, in figures, how much money Kelly and Natasha each had.



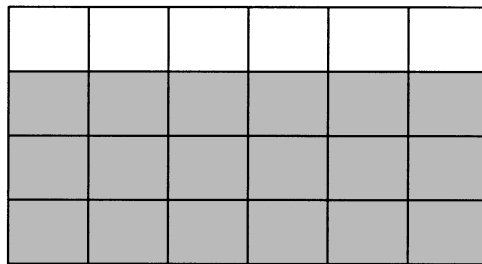
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Natasha      £.....

Kelly         £.....

(2)

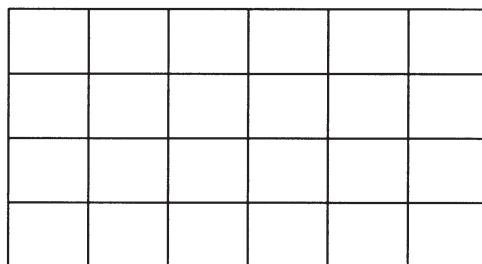
3. (a) Write down the fraction of this shape that is shaded.



Write your fraction in its simplest form.

.....  
(2)

(b) Shade  $\frac{2}{3}$  of this shape.



(1)

Page Total

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4. (a) In the space below, draw a line 12 cm long.

(1)

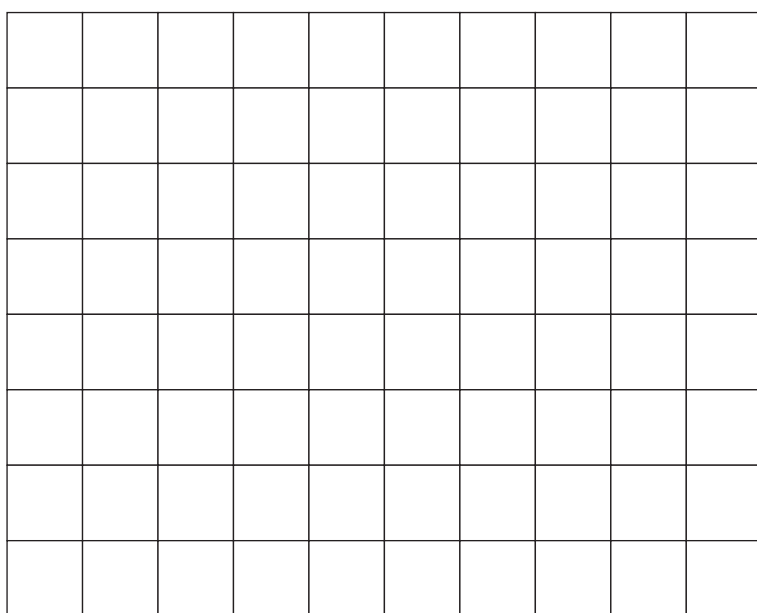
(b) Find the point that is halfway along the line you have drawn.

Mark it with a cross (×).

(1)

Here is a grid of centimetre squares.

(c) On the grid draw a rectangle that has length 6 cm and width 4 cm.



(1)

5. Complete this table.

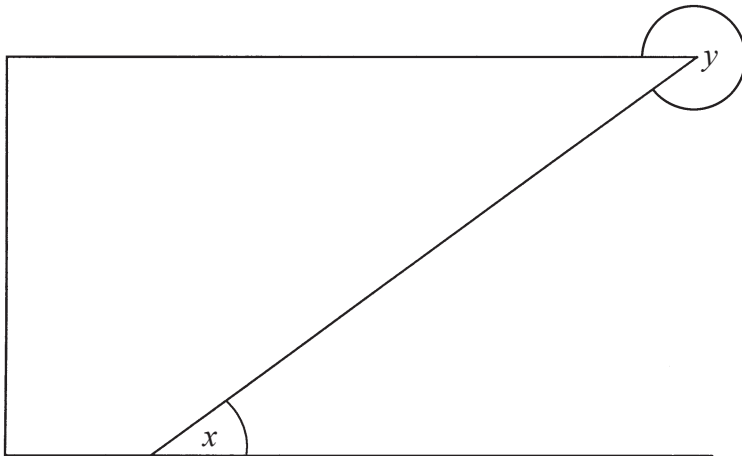
Write a sensible unit for each measurement.

	Metric	Imperial
The weight of a turkey	.....	pounds
The volume of water in a swimming pool	.....	gallons
The width of this page	centimetres	.....

(3)

6. The lines in the diagram are straight.

*Leave blank*



(a) Mark with arrows, ( $\gg$ ), a pair of parallel lines.

(1)

(b) Mark with the letter R, a right angle.

(1)

(c) What type of angle is shown by the letter

(i)  $x$ ,

.....

(ii)  $y$ .

.....

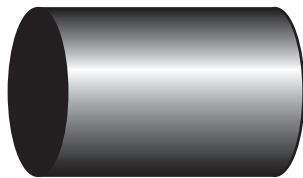
(2)

7. Write down the mathematical name for each of these three different 3-D shapes.

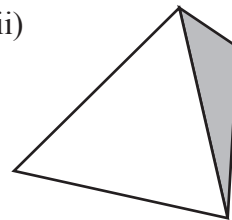
(i)



(ii)



(iii)



(i) .....

(ii) .....

(iii) .....

(3)

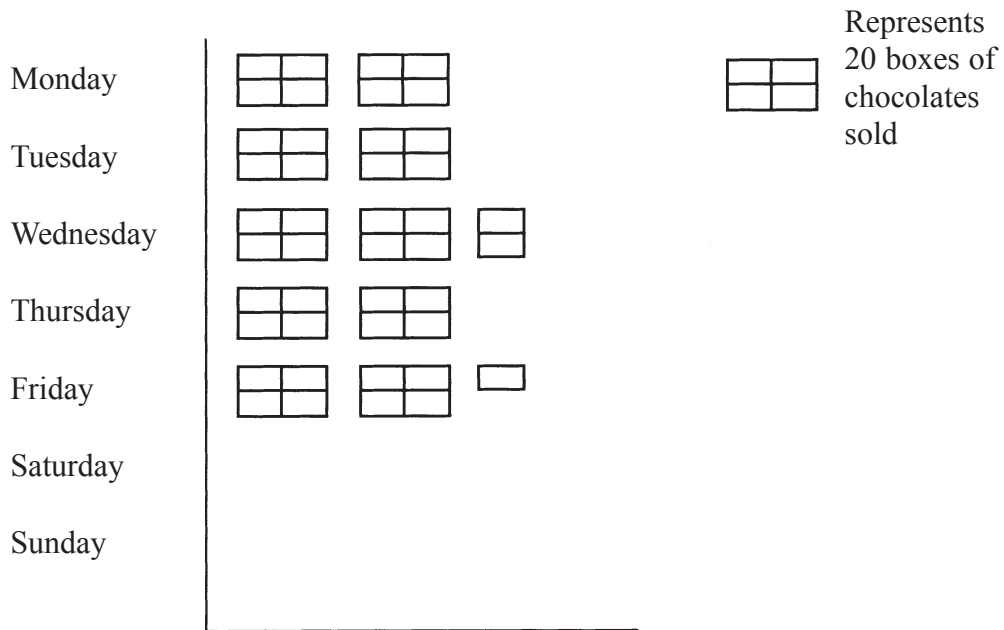
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8. Here is a pictogram.  
It shows the number of boxes of chocolates sold last week from Monday to Friday.

*Leave blank*



(a) Write down the number of boxes of chocolates sold on

(i) Monday,

.....

(ii) Wednesday.

.....

**(2)**

On Saturday, 100 boxes of chocolates were sold.

(b) Show this on the pictogram.

**(1)**

On Sunday, 55 boxes of chocolates were sold.

(c) Show this on the pictogram.

**(1)**

9. Write these numbers in order of size.  
Start with the smallest number.

*Leave  
blank*

(i) 75, 56, 37, 9, 59

.....

(ii) 0.56, 0.067, 0.6, 0.65, 0.605

.....

(iii) 5, -6, -10, 2, -4

.....

(iv)  $\frac{1}{2}$ ,  $\frac{2}{3}$ ,  $\frac{2}{5}$ ,  $\frac{3}{4}$

.....

(5)

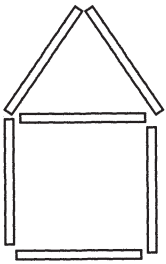
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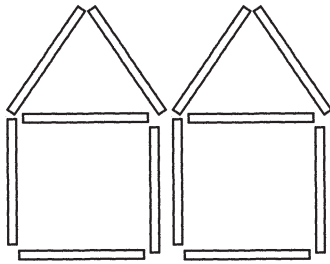
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10. Here are some patterns made from matchsticks.

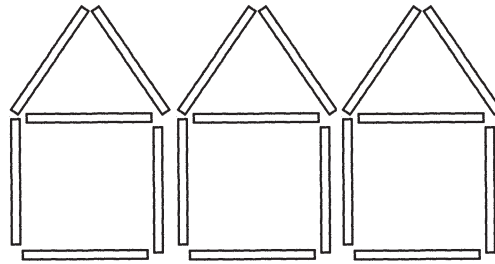
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Pattern number 1



Pattern number 2



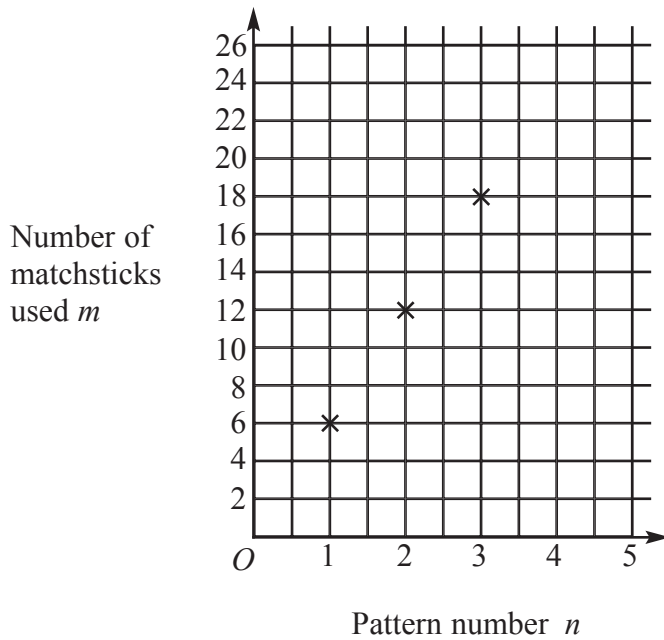
Pattern number 3

(a) Draw Pattern number 4, in the space below.

(1)

The graph shows the number of matchsticks  $m$  in pattern number  $n$ .

(b) Mark the point which shows the number of matchsticks used in Pattern number 4.



(1)

(c) How many matchsticks are used in Pattern number 10?

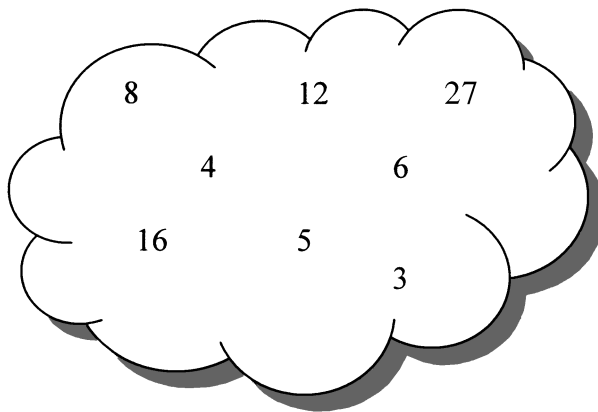
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.....  
**(1)**

(d) Write down a formula for  $m$  in terms of  $n$ .

.....  
**(2)**

**11.**



Using only the numbers in the cloud, write down

(i) all the multiples of 6,

.....

(ii) all the square numbers,

.....

(iii) all the factors of 12,

.....

(iv) all the cube numbers.

.....

**(4)**

**Page Total**

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**Turn over**

12. Tanya goes shopping.

*Leave  
blank*

She buys

$\frac{1}{2}$  kg of apples at 72p per kg,

4 bananas at 24p each,

5 kg of potatoes at 25p per kg.

She pays with a £5 note.

Work out how much change she should get.

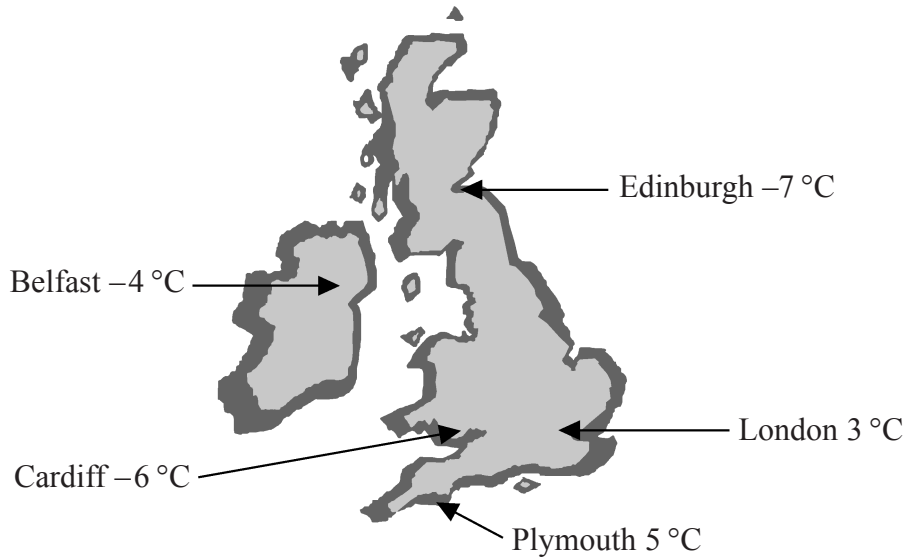
£ .....

**(4)**

13. Here is a map of the British Isles.

*Leave  
blank*

The temperatures in some places, one night last winter are shown on the map.



(a) (i) Write down the names of the two places that had the biggest difference in temperature.

.....

(ii) Work out the difference in temperature between these two places.

..... °C  
(3)

(b) Two pairs of places have a difference in temperature of 2 °C.  
Write down the names of these places.

(i) ..... and .....

(ii) ..... and .....

(2)

Page Total

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Turn over

14. Here is a table for a two-stage number machine.  
It multiplies by 2 then subtracts 1.  
Complete the missing numbers in the table.

*Leave blank*

$\times 2 - 1$	
Input	Output
1	1
2	3
3	.....
5	.....
.....	15

(3)

15. Here is a net of a cube.

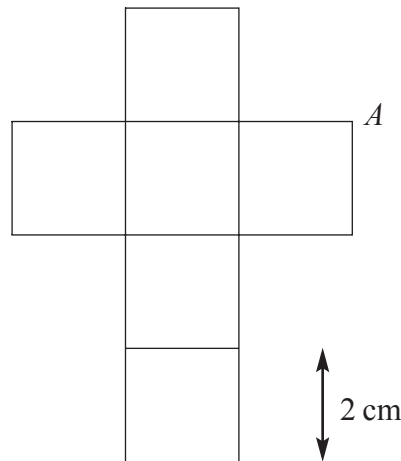


Diagram **NOT** accurately drawn

The net is folded to make the cube.

Two other vertices meet at  $A$ .

- (a) Mark each of them with the letter  $A$ .

(2)

The length of each edge of the cube is 2 cm.

- (b) Work out the volume of the cube.

.....  $\text{cm}^3$   
(2)

16. Rosie had 10 boxes of drawing pins.

She counted the number of drawing pins in each box.

The table gives information about her results.

Number of drawing pins	Frequency	
29	2	
30	5	
31	2	
32	1	

(a) Write down the modal number of drawing pins in a box.

.....  
**(1)**

(b) Work out the range of the number of drawing pins in a box.

.....  
**(1)**

(c) Work out the mean number of drawing pins in a box.

.....  
**(3)**

*Leave blank*

**Page Total**

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**Turn over**

17. Bob carried out a survey of 100 people who buy tea.

He asked them about the tea they buy most.

The two-way table gives some information about his results.

*Leave  
blank*

	Tea bags	Packet tea	Instant tea	Total
50 g	2	0	5	
100 g	35	20		60
200 g	15			
Total		25		100

Complete the two-way table.

(3)

18. (a) Simplify

*Leave blank*

(i)  $c + c + c + c$

.....

(ii)  $p \times p \times p \times p$

.....

(iii)  $3g + 5g$

.....

(iv)  $2r \times 5p$

.....

**(4)**

(b) Expand

$5(2y - 3)$

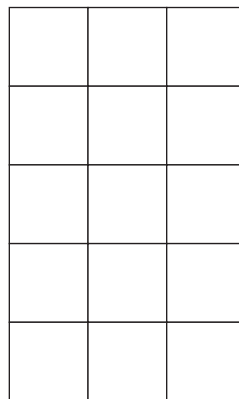
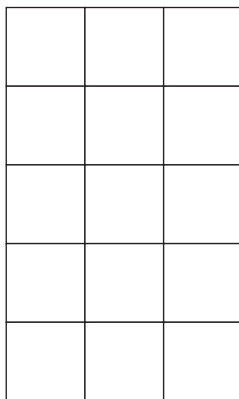
.....

**(1)**

19. Here are two fractions  $\frac{3}{5}$  and  $\frac{2}{3}$ .

Explain which is the larger fraction.

You may use the grids to help with your explanation.



.....

.....

.....

**(3)**

**Page Total**

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20. Fatima bought 48 teddy bears at £9.55 each.

(a) Work out the total amount she paid.



*Leave  
blank*

£ .....  
(3)

Fatima sold all the teddy bears for a total of £696.

She sold each teddy bear for the same price.

(b) Work out the price at which Fatima sold each teddy bear.

£ .....  
(3)

21. Lisa packs pencils in boxes.  
 She packs 12 pencils in each box.  
 Lisa packs  $x$  boxes of pencils.



*Leave  
blank*

(a) Write an expression, in terms of  $x$ , for the number of pencils Lisa packs.

.....  
 (1)

Lisa also packs pens in boxes.  
 She packs 10 pens into each box.  
 Lisa packs  $y$  boxes of pens.

(b) Write down an expression, in terms of  $x$  and  $y$ , for the **total** number of pens and pencils Lisa packs.

.....  
 (2)

22. Simon spent  $\frac{1}{3}$  of his pocket money on a computer game.  
 He spent  $\frac{1}{4}$  of his pocket money on a ticket for a football match.  
 Work out the fraction of his pocket money that he had left.

.....  
 (3)

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23.

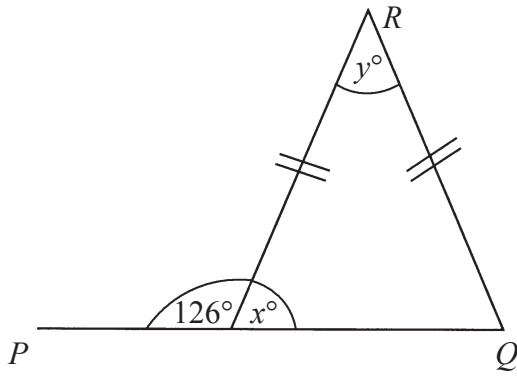


Diagram **NOT** accurately drawn

Leave blank

$PQ$  is a straight line.

(a) Work out the size of the angle marked  $x^\circ$ .

.....  
.....  
**(1)**

(b) (i) Work out the size of the angle marked  $y^\circ$ .

.....  
.....

(ii) Give reasons for your answer.

.....  
.....  
**(3)**

24. Tayub said, “When  $x = 3$ , then the value of  $4x^2$  is 144”.

Bryani said, “When  $x = 3$ , then the value of  $4x^2$  is 36”.

(a) Who was right?

Explain why.

**(2)**

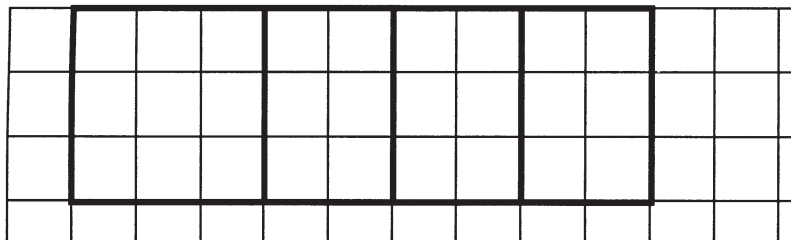
(b) Work out the value of  $4(x + 1)^2$  when  $x = 3$ .

.....  
**(1)**

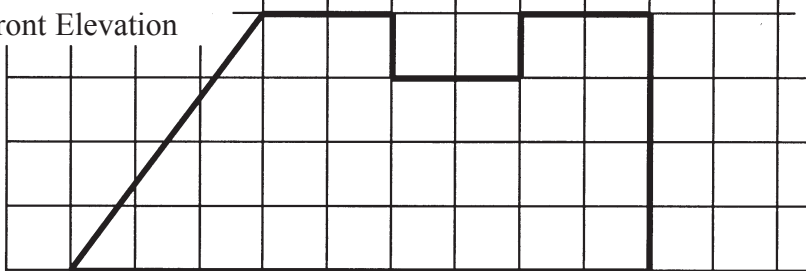
25. Here are the plan and front elevation of a prism.  
The front elevation shows the cross section of the prism.

*Leave blank*

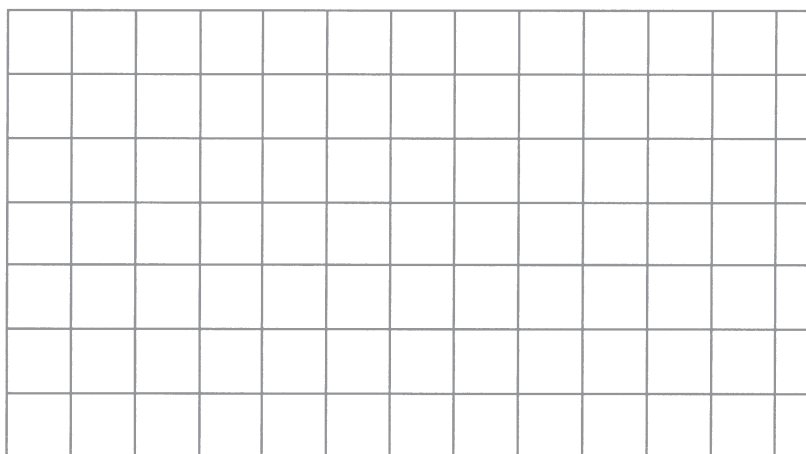
Plan



Front Elevation



- (a) On the grid below, draw a side elevation of the prism.



- (b) In the space below, draw a 3-D sketch of the prism.

(3)

(2)

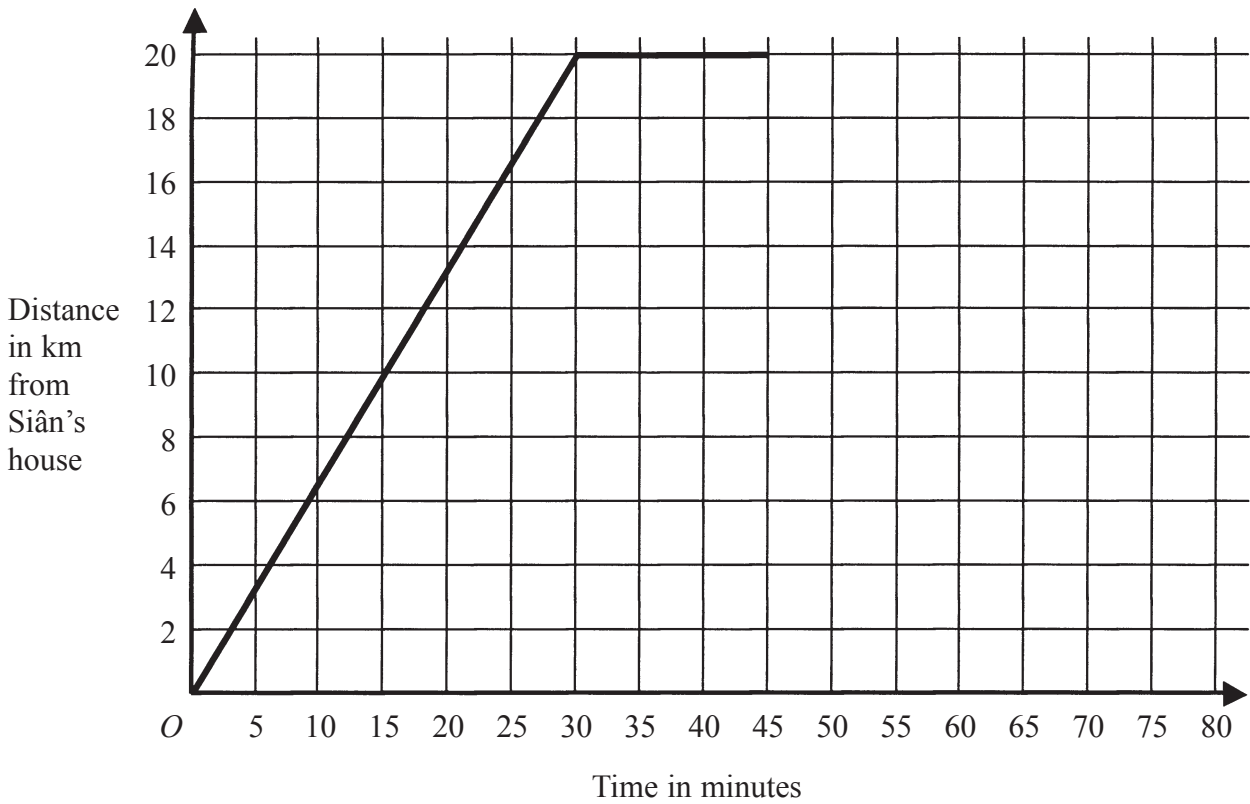
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26. Here is part of a travel graph of Siân's journey from her house to the shops and back.

*Leave blank*



- (a) Work out Siân's speed for the first 30 minutes of her journey.  
Give your answer in km/h.

..... km/h  
(2)

Siân spends 15 minutes at the shops.  
She then travels back to her house at 60 km/h.

- (b) Complete the travel graph.

(2)

**TOTAL FOR PAPER : 100 MARKS**

**END**

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