

Centre Number						Candidate Number				
Surname										
Other Names										
Candidate Signature										

For Examiner's Use	
Pages	Mark
3	
4 – 5	
6 – 7	
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10 – 11	
12 – 13	
14 – 15	
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22	
TOTAL	



General Certificate of Secondary Education
Foundation Tier

Mathematics (Linear) B

4365/1F

Paper 1 Non-calculator

F

Practice Paper 2012 Specification (Set 4)

<p>For this paper you must have:</p> <ul style="list-style-type: none"> mathematical instruments. <p>You must not use a calculator.</p>	
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Time allowed

- 1 hour 15 minutes

Instructions

- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Fill in the boxes at the top of this page.
- Answer **all** questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this book. Cross through any work that you do not want to be marked.

Information

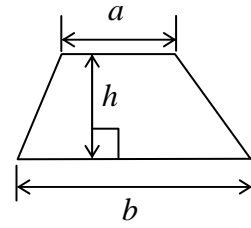
- The marks for questions are shown in brackets.
- The maximum mark for this paper is 70.
- The quality of your written communication is specifically assessed in Questions 4, 7 and 15. These questions are indicated with an asterisk (*).
- You may ask for more answer paper, graph paper and tracing paper. These must be tagged securely to this answer booklet.

Advice

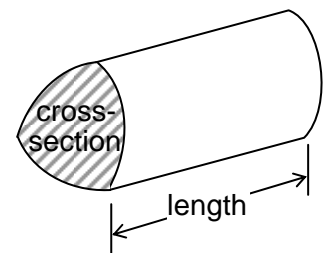
- In all calculations, show clearly how you work out your answer.

Formulae Sheet: Foundation Tier

Area of trapezium = $\frac{1}{2}(a + b)h$

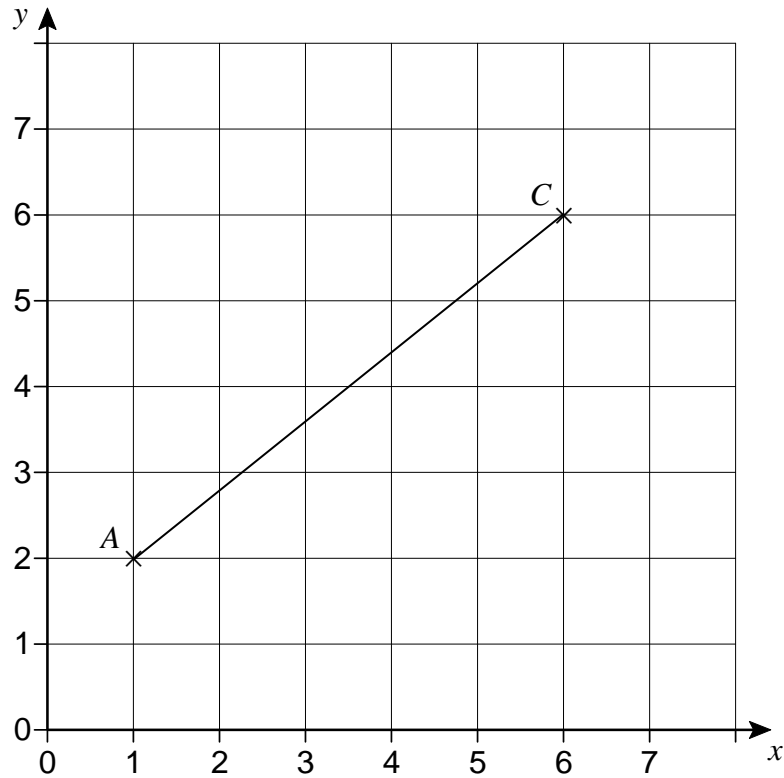


Volume of prism = area of cross-section \times length



Answer **all** questions in the spaces provided.

1



1 (a) Write down the coordinates of *A*.

Answer (.....,) (1 mark)

1 (b) Triangle *ABC* has a right-angle at *B*.

Plot a possible point *B* on the grid.

(1 mark)

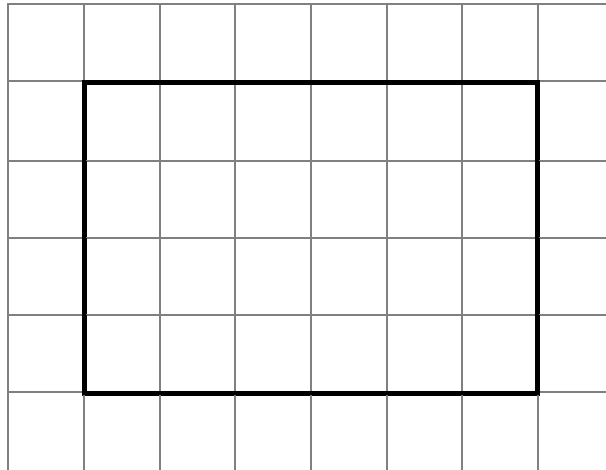
2 (a) Work out $385 - 179$

Answer (1 mark)

2 (b) Work out $162 \div 3$

Answer (1 mark)

3 A quadrilateral is drawn on a centimetre grid.



3 (a) What is the name of this quadrilateral?

Answer (1 mark)

3 (b) Work out the perimeter.

Answer cm (1 mark)

4 (a) Complete the shopping bill.

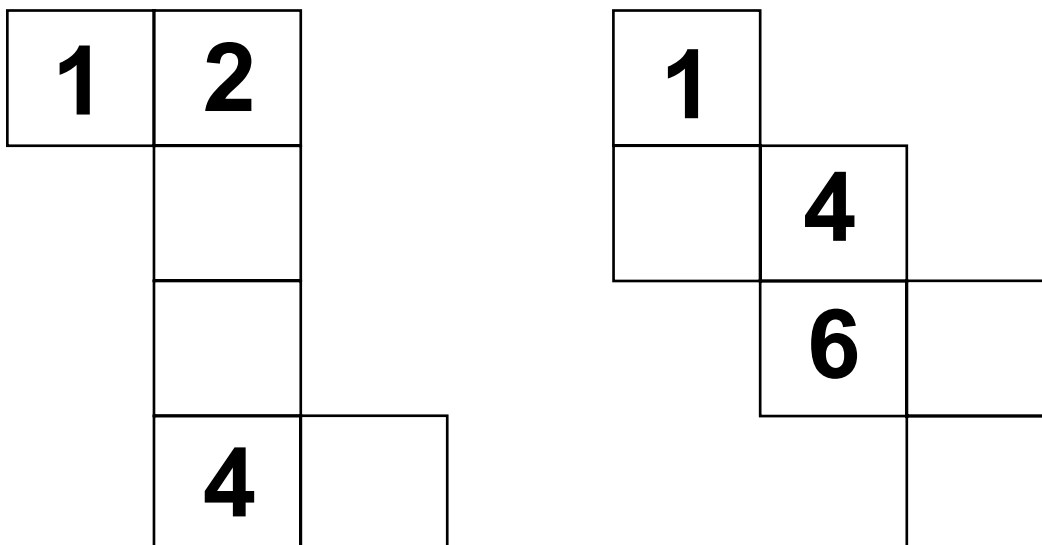
3 cans of Cola at 60p per can	£1.80
2 Chocolate bars at 90 p per bar
1 magazine at £ 1.70	£1.70
Total

(2 marks)

***4 (b)** How much change would you get from a £10 note?

Answer £..... (1 mark)

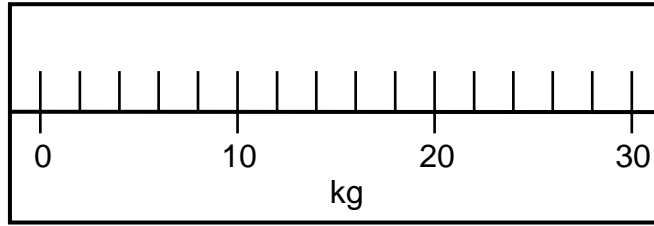
5 Here are two nets of ordinary six-sided dice.



Fill in numbers on the blank faces of the nets so that opposite sides of the dice add up to 7.

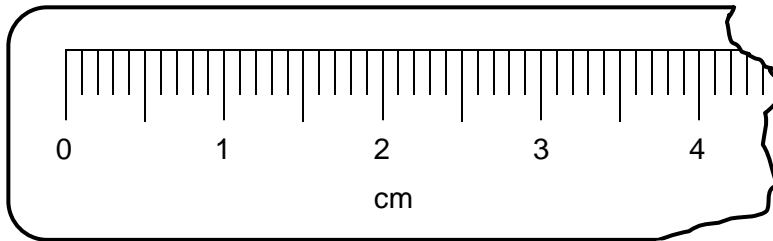
(3 marks)

6 (a) Draw an arrow on this scale to show 27kg.



(1 mark)

6 (b) Draw an arrow on this scale to show 36mm.



(1 mark)

- *7 An electric kettle is filled to the depth shown.



A cup of tea needs 250ml of water.

1 litre = 1000ml

Does this kettle hold enough water to make 5 cups of tea?

You **must** show your working.

.....

.....

.....

.....

.....

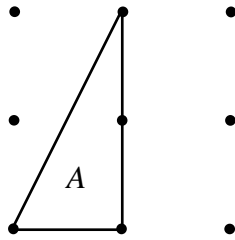
.....

(3 marks)

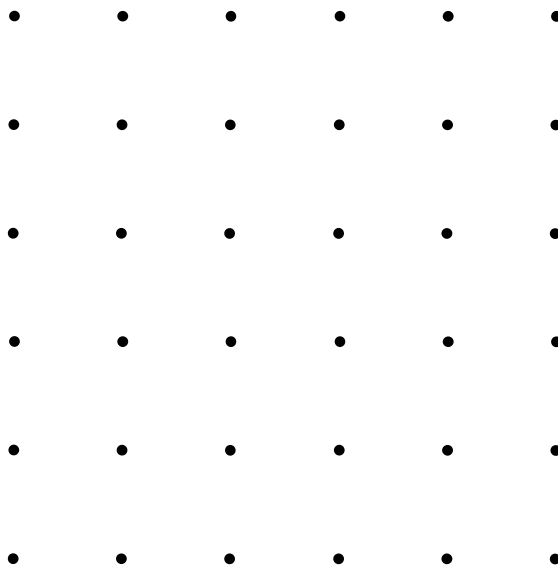
There are no questions printed on this page

**DO NOT WRITE ON THIS PAGE
ANSWER IN THE SPACES PROVIDED**

- 8 Triangle A is shown on the grid.

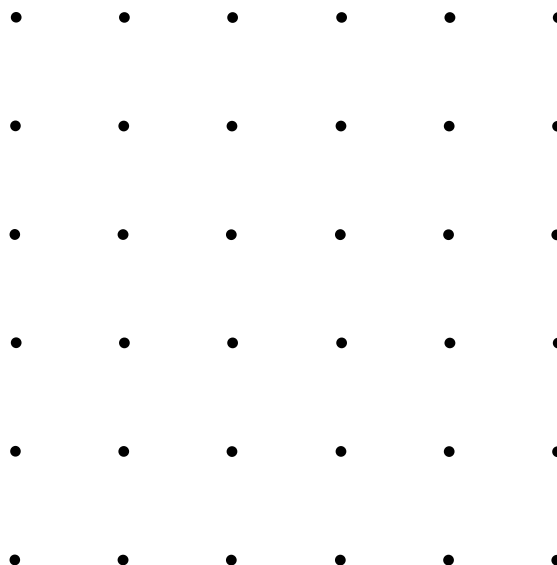


- 8 (a) On the grid below draw a triangle that is congruent to triangle A .



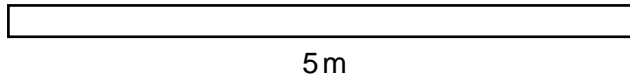
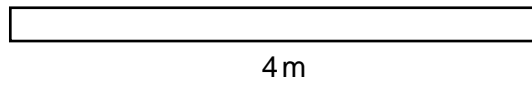
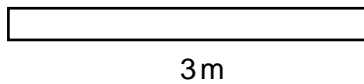
(1 mark)

- 8 (b) On the grid below draw an enlargement, scale factor 2, of triangle A .



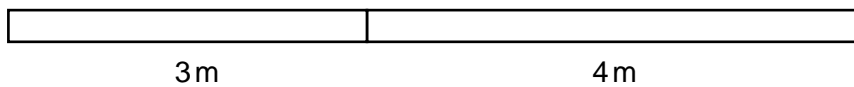
(1 mark)

- 9 Tim has 3 rods.



Not drawn
accurately

He uses **two** rods to measure a length of 7 metres.



Not drawn
accurately

- 9 (a) Draw a diagram to show how Tim can use **two** rods to measure a length of 8 metres.

(1 mark)

- 9 (b) Draw a diagram to show how Tim can use **two** rods to measure a length of 2 metres.

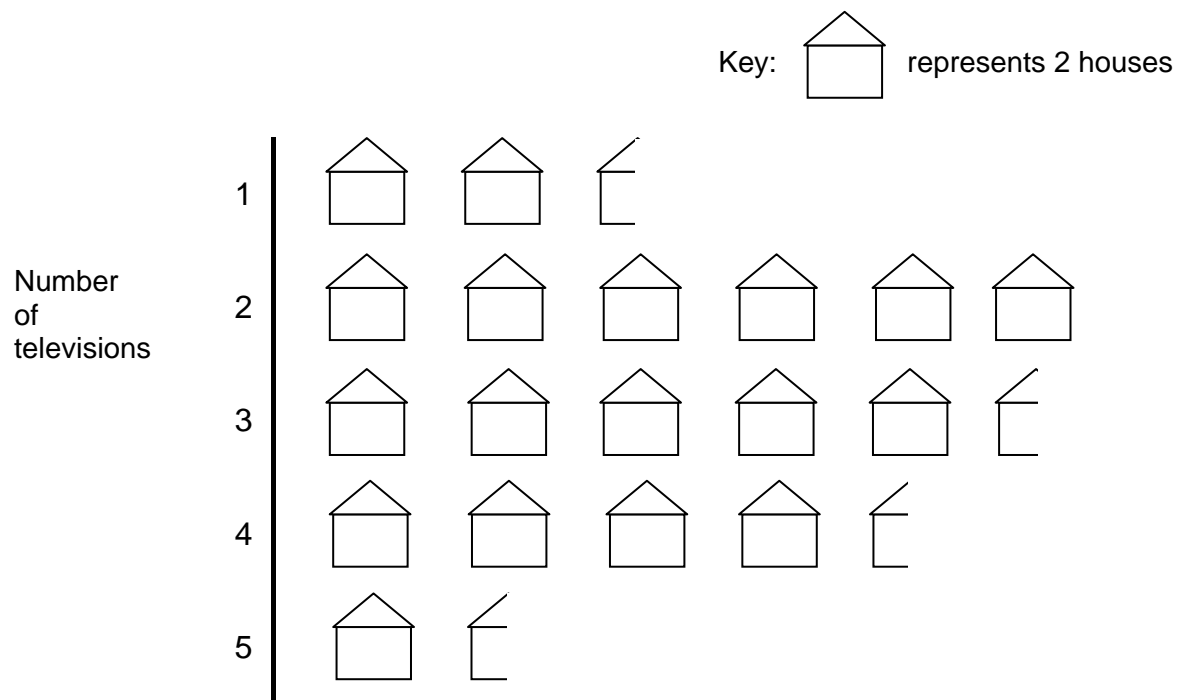
(1 mark)

- 9 (c) Draw a diagram to show how Tim can use all **three** rods to measure a length of 6 metres.

(1 mark)

Turn over for the next question

10 This pictogram shows the number of televisions in 40 houses in 2011.




10 (a) What number of televisions is the mode?

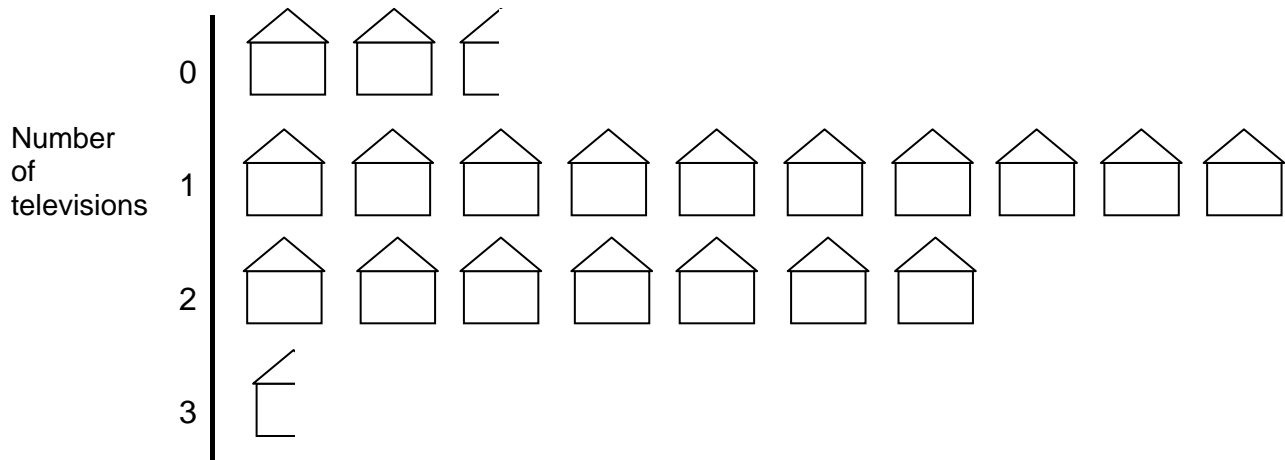
Answer (1 mark)

10 (b) How many houses have 4 televisions?

Answer (1 mark)

10 (c) This pictogram shows the number of televisions in the same houses in 1991.

Key:  represents 2 houses



Give two differences in the number of televisions in 2011 and 1991.

Difference 1

.....

Difference 2

.....

(2 marks)

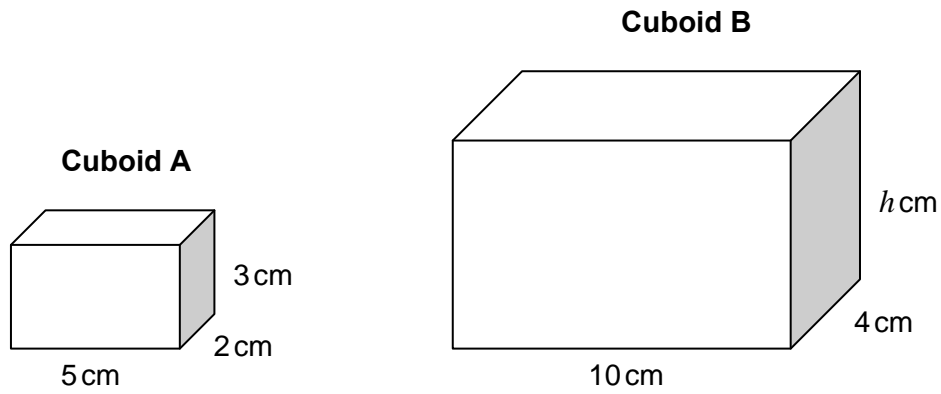
11 Tick a box to say if these statements are true or false.

	True	False
2.2 pounds is approximately 1 kilogram.	<input type="checkbox"/>	<input type="checkbox"/>
4.5 litres is approximately 1 gallon.	<input type="checkbox"/>	<input type="checkbox"/>
2.5 inches is approximately 1 centimetre.	<input type="checkbox"/>	<input type="checkbox"/>
8 miles is approximately 5 kilometres.	<input type="checkbox"/>	<input type="checkbox"/>

(4 marks)

8

- 12 The height of cuboid B is twice the height of cuboid A.



- 12 (a) Work out h .

Answercm (1 mark)

- 12 (b) Work out the area of the shaded face of cuboid B.

Answer cm² (2 marks)

- 12 (c) How many of cuboid A will fit in to cuboid B?

Answer (2 marks)

13 Work out the mean of these 10 numbers.

7 11 12 17 19 21 23 28 29 33

.....

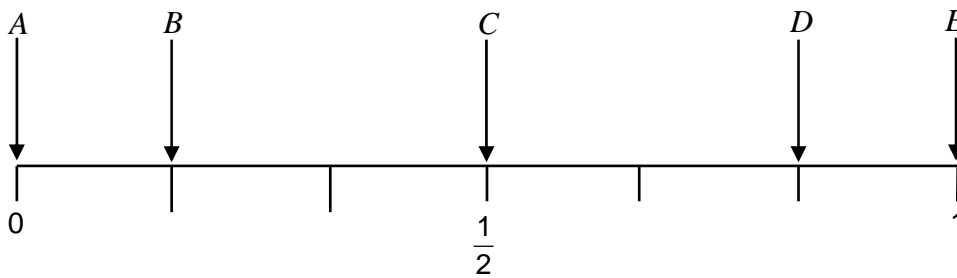
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Answer (3 marks)

14 Match each event to an arrow on the probability scale.



An ordinary dice is rolled.

Rolling an odd number matches arrow

Rolling a 7 matches arrow

Rolling a 6 matches arrow

(3 marks)

11

***15** A timetable for trains from London to Huddersfield is shown.
Passengers have to change in Leeds.

London	depart	09:15	11:05	11:15	12:07
Leeds	arrive	11:10	13:00	13:15	14:00
Leeds	depart	11:36	13:09	13:36	14:36
Huddersfield	arrive	12:10	13:55	14:10	15:10

15 (a) The 09:15 from London arrives in Huddersfield at 12:10
How long does this journey take altogether?

Answer (1 mark)

15 (b) A football match in Huddersfield starts at 3 pm
It takes Trevor 35 minutes to walk from the station to the football ground.
Which train could he catch from London to be at the match on time?
You must show your working.

.....

.....

.....

.....

(3 marks)

16 $x^2 = 3^2 + 4^2$

Work out the value of x .
You **must** show your working.

.....

Answer (2 marks)

- 17** A plumber uses this formula for working out how much to charge for a job.

$$\text{Charge (£)} = 25 + 30 \times \text{number of hours}$$

How much will she charge for a job that lasts 3 hours?

.....

.....

.....

Answer £ (2 marks)

- 18 (a)** Multiply out $5(x - 3)$

.....

Answer (1 mark)

- 18 (b)** Factorise $3y - 12$

.....

Answer (1 mark)

- 18 (c)** Expand and simplify $2(3w + 2) + 3(5w - 1)$

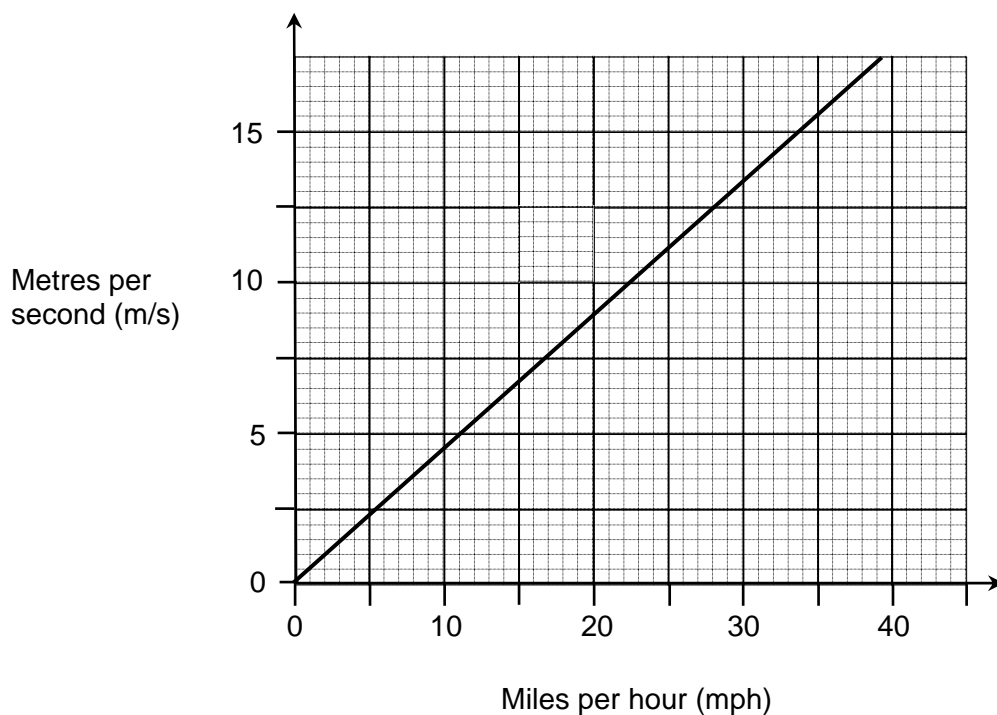
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Answer (2 marks)

19 Here is a conversion graph.



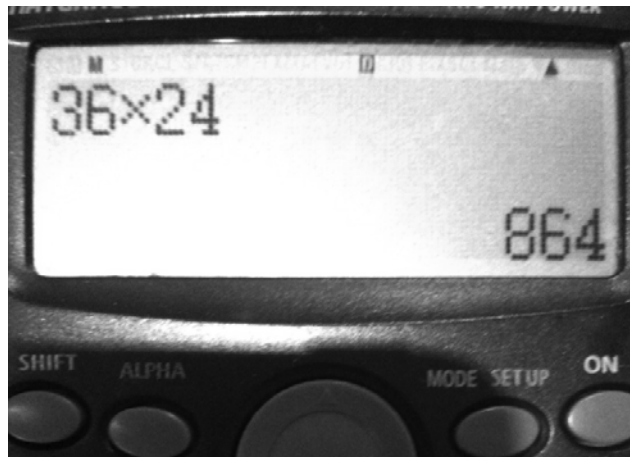
19 (a) Use the graph to convert 50 m/s to mph.
You **must** show your working.

Answer mph (2 marks)

19 (b) Carl runs 100 metres in 9.98 seconds.
Use the graph to **estimate** his average speed in miles per hour.
You **must** show your working.

Answer mph (3 marks)

20 Jane uses her calculator to work out 36×24



Use the calculator display to help you.

20 (a) 36×12

Answer (1 mark)

20 (b) 37×24

Answer (1 mark)

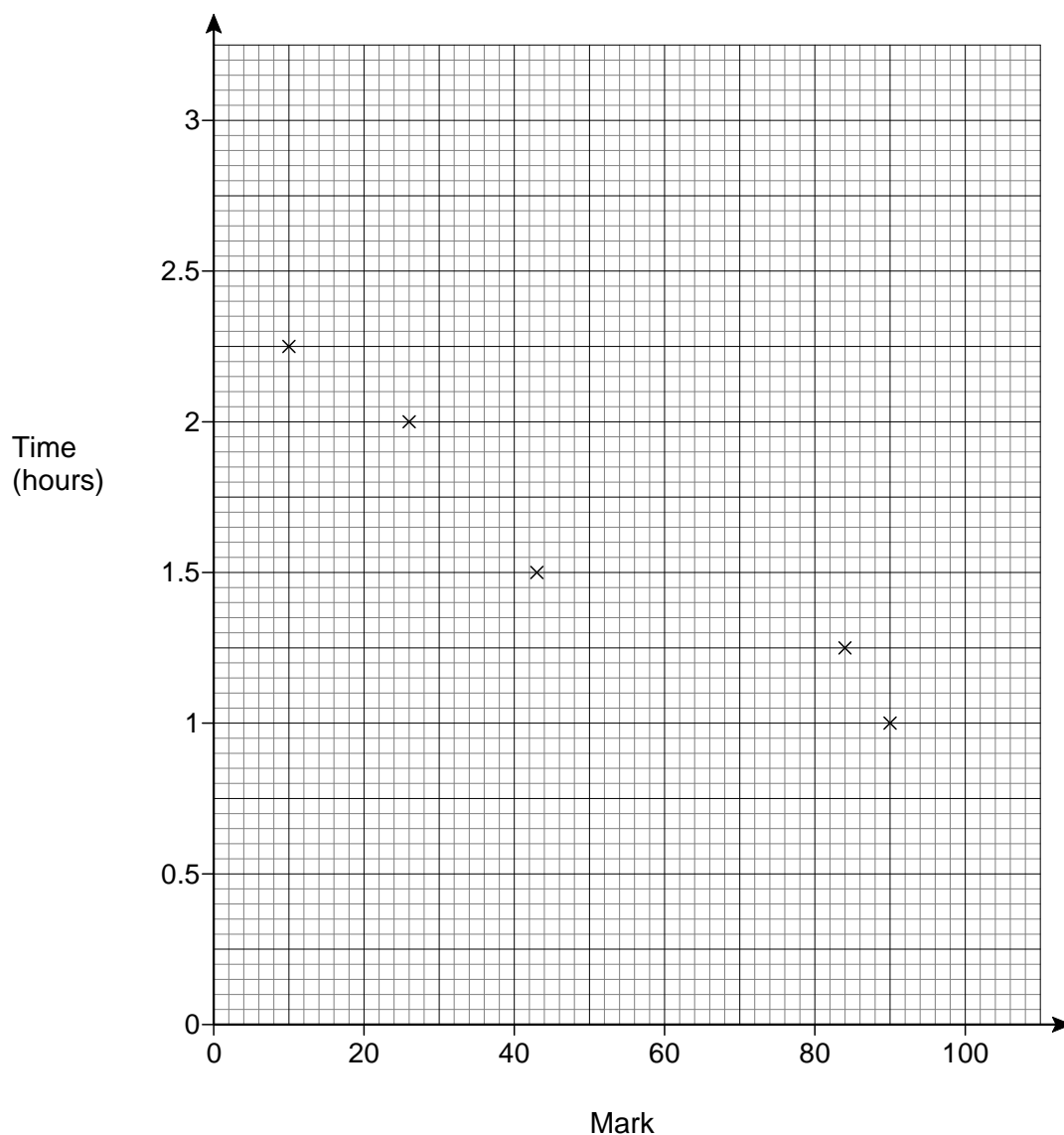
20 (c) $8640 \div 36$

Answer (1 mark)

- 21** 10 students record the time spent watching TV the evening before a test.
The table shows the times and their marks on the test.

Time (hours)	2.25	1	1.5	2	1.25	1.75	1.25	2.5	1.5	0.5
Mark	10	90	43	26	84	34	76	8	40	93

- 21 (a)** Plot a scatter graph of the data.
The first five points have been plotted for you.



(2 marks)

21 (b) Describe the correlation shown by the scatter graph.

Answer (1 mark)

21 (c) A headteacher wants to encourage students to revise more for tests.

How does the data support the headteacher?

.....
.....
.....
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(1 mark)

21 (d) Another student scored 60 on the test.

Use the scatter graph to estimate the number of hours she watched TV the evening before the test.

Show clearly how you obtained your answer.

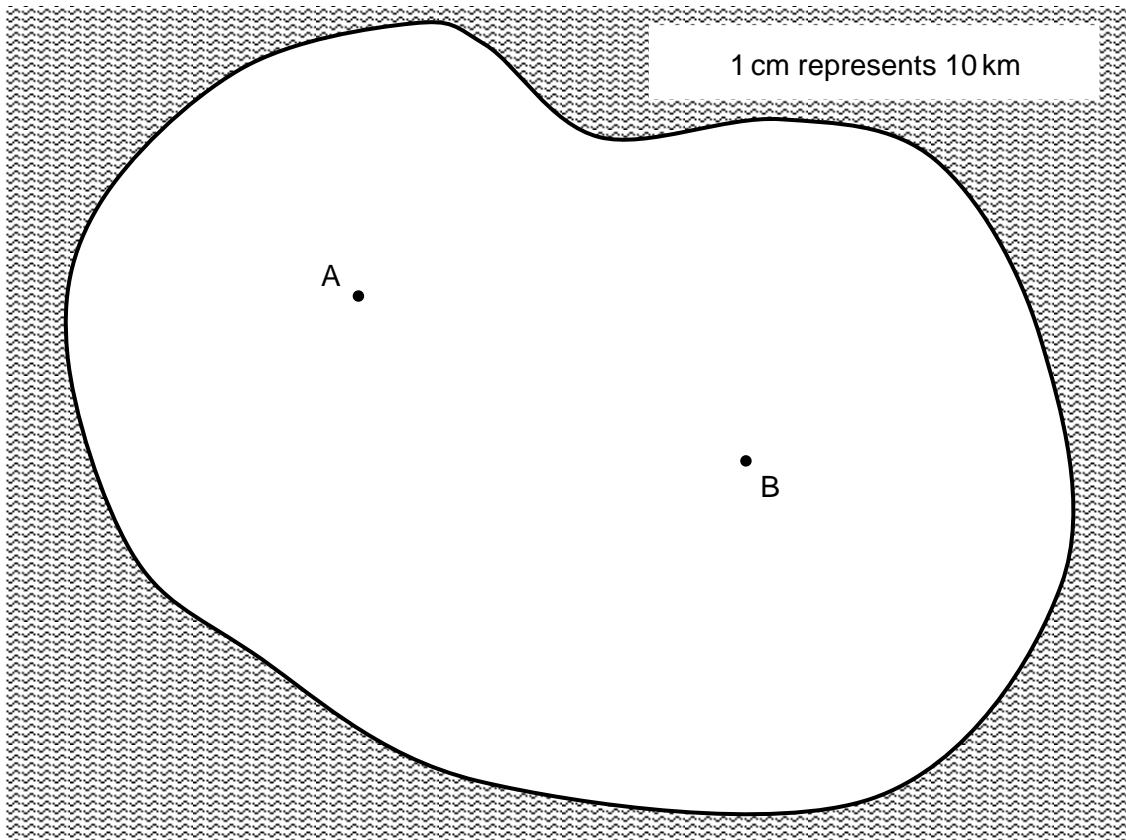
Answer hours (2 marks)

Turn over for the next question

22 There are two radio masts on an island.

Mast A has a range of 40km.

Mast B has a range of 50km.



Can all parts of the island receive radio signals?

Show how you decide.

(3 marks)

END OF QUESTIONS