Write your name here

Surname	Other names

Edexcel GCSE

Centre Number	Candidate Number

Mathematics A

Paper 1 (Non-Calculator)

Practice Papers Set D

Foundation Tier

Time: 1 hour 45 minutes

Paper Reference
1MA0/1F

You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser. Tracing paper may be used.

Total Marks

Instructions

- Use black ink or ball-point pen.
- Fill in the boxes at the top of this page with your name,
- centre number and candidate number.
- Answer all questions.
- Answer the questions in the spaces provided
  – there may be more space than you need.
- Calculators must not be used.

Information

- The total mark for this paper is 100
- The marks for each question are shown in brackets
  – use this as a guide as to how much time to spend on each question.
- Questions labelled with an asterisk (*) are ones where the quality of your written communication will be assessed.

Advice

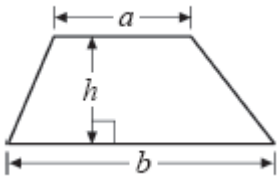
- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

GCSE Mathematics 1MA0

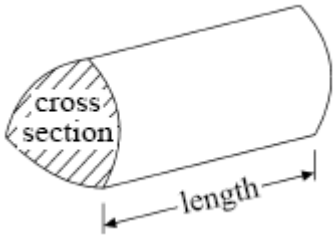
Formulae: Foundation Tier

You must not write on this formulae page.
Anything you write on this formulae page will gain NO credit.

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



Volume of prism = area of cross section × length



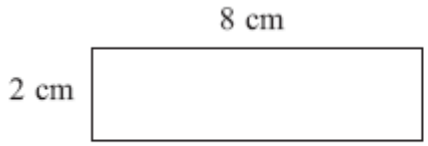
Answer ALL THIRTY TWO questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

You must NOT use a calculator.

1. The diagram shows a rectangle and a square.



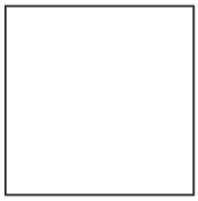


Diagram **NOT** accurately drawn

The perimeter of the rectangle is the same as the perimeter of the square.

Work out the length of one side of the square.

..... cm

(Total for Question 1 is 4 marks)

***2.** Here is part of a bus timetable from Harrow Lane to Cartbridge Street.

Harrow Lane to Cartbridge Street

Harrow Lane	08 02	09 04	10 12	11 02	12 04	12 12
Elm Drive	08 19	09 21	10 29	11 19	12 21	12 29
Hamden Road	08 32	09 34	10 42	11 32	12 34	12 42
Swipe Crescent	08 41	09 43	10 51	11 41	12 43	12 51
Cartbridge Street	08 50	09 52	11 01	11 50	12 52	13 01

Here is part of a bus timetable from Cartbridge Street to Harrow Lane.

Cartbridge Street to Harrow Lane

Cartbridge Street	13 11	14 14	15 07	16 11	17 14	18 07
Swipe Crescent	13 20	14 24	15 16	16 20	17 24	18 16
Hamden Road	13 29	14 33	15 25	16 29	17 33	18 25
Elm Drive	13 43	14 47	15 39	16 43	17 47	18 39
Harrow Lane	13 53	14 57	15 49	16 53	17 57	18 49

Peter lives in Harrow Lane.
His grandmother lives in Swipe Crescent.

Peter visits his grandmother.
He goes by bus from Harrow Lane to Swipe Crescent.

Peter wants to have at least 3 hours with his grandmother.
He needs to be back at Harrow Lane by 16 00

Plan Peter's journey to visit his grandmother and get back to Harrow Lane.
You must include the times of the buses.

(Total for Question 2 is 4 marks)

3. The table shows the minimum distance and the maximum distance people should sit from different sized TV screens when watching TV.

TV screen size (inches)	Minimum distance (feet)	Maximum distance (feet)
28	3.5	7
30	3.75	7.5
32	4	8
36	4.5	9
38	4.75	9.5
40	5	10
42	5.25	10.5

Sheraz has a TV with a screen size of 38 inches.
He is going to watch his TV.

Work out the difference between the minimum distance and the maximum distance Sheraz should sit from the screen.

..... feet

(Total for Question 3 is 2 marks)

4. Here are the ingredients needed to make 16 gingerbread men.

Ingredients to make **16** gingerbread men	
180 g	flour
40 g	ginger
110 g	butter
30 g	sugar

Hamish wants to make 24 gingerbread men.
Work out how much of each of the ingredients he needs.

.....g flour

.....g ginger

.....g butter

.....g sugar

(Total for Question 4 is 3 marks)

5. Simplify $f + f + f + f - f$

.....

(Total for Question 5 is 1 mark)

---

6. Felicity asked 100 students how they came to school one day.
Each student walked or came by bicycle or came by car.

49 of the 100 students are girls.
10 of the girls came by car.
16 boys walked.
21 of the 41 students who came by bicycle are boys.

Work out the total number of students who walked to school.

.....

(Total for Question 6 is 4 marks)

---

7. Alison wants to find out how much time people spend reading books.
She is going to use a questionnaire.

Design a suitable question for Alison to use in her questionnaire.

(Total for Question 7 is 2 marks)

8. The stem and leaf diagram shows some information about the speeds of 25 cars.

2	9									
3	1	3	5	6	7	8	8	9		
4	2	3	3	4	5	6	8	8	9	9
5	1	2	4	5	6					
6	0									

Key:

2 | 9 means 29 miles per hour

Find the median speed.

..... miles per hour

(Total for Question 8 is 1 mark)

---

9. Sapir buys 60 bags.
She pays £3 for each bag.
Sapir sells $\frac{1}{2}$ of the bags for £5 each.
She sells $\frac{1}{3}$ of the bags for £4 each.
Sapir wants to make a total profit of £75

How much should she sell each of the remaining bags for?

£.....

(Total for Question 9 is 4 marks)

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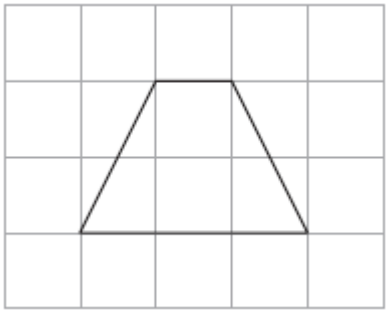
10. A quadrilateral has been drawn on the grid.

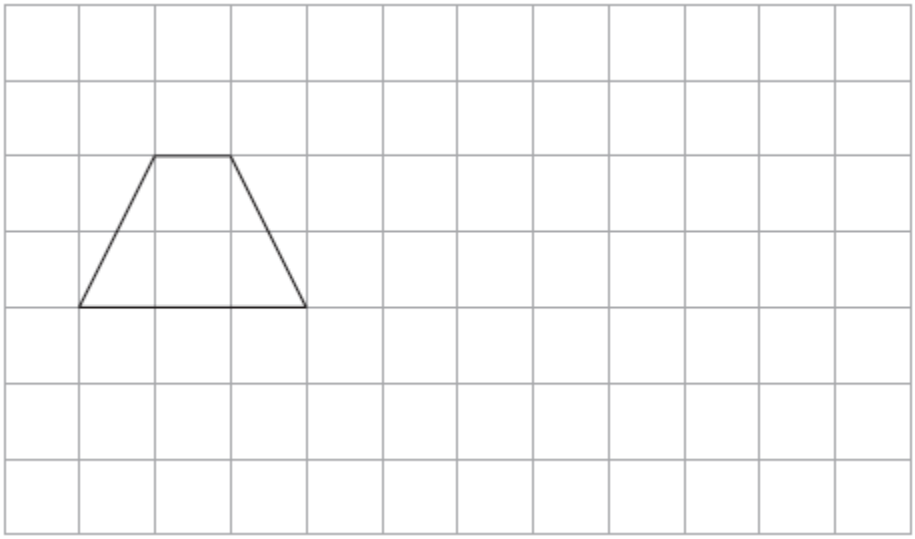


(a) Write down the mathematical name of this quadrilateral.

.....

(1)

(b) On the grid below, show how the quadrilateral tessellates.
You should draw at least 6 shapes.



(2)

(Total for Question 10 is 3 marks)

---

11. Work out the value of $5^2 + 2^3$

.....

(Total for Question 11 is 2 marks)

***12.** Debbie, Salma and Wendy did a Maths test.
The total for the test was 40 marks.

Debbie got 16 out of 40

Salma got 35% of the 40 marks.

Wendy got $\frac{3}{8}$ of the 40 marks.

Who got the highest mark?
You must show all your working.

(Total for Question 12 is 4 marks)

13.

Take **two** 5 m*l* spoons full
twice a day

There are 300 m*l* of medicine in a bottle.
Mary has to take two 5 m*l* spoons full of medicine twice a day.

Mary has to take the medicine until the bottle is empty.

(a) How many days does Mary have to take the medicine for?

..... days
(3)

You can work out the amount of medicine, *c* m*l*, to give to a child by using the formula

$$c = \frac{ma}{150}$$

m is the age of the child, in months.
a is an adult dose, in m*l*.

A child is 30 months old.
An adult's dose is 40 m*l*.

(b) Work out the amount of medicine you can give to the child.

..... m*l*
(2)

(Total for Question 13 is 5 marks)

14. Here are the ingredients needed to make 12 shortcakes.

Shortcakes

Makes **12** shortcakes

50 g	of sugar
200 g	of butter
200 g	of flour
10 m*l*	of milk

Robert has
500 g of sugar
1000 g of butter
1000 g of flour
500 m*l* of milk

Work out the greatest number of shortcakes Robert can make.

.....

(Total for Question 14 is 2 marks)

15. The diagram shows a patio in the shape of a rectangle.

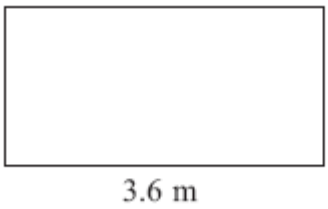


Diagram **NOT** accurately drawn

The patio is 3.6 m long and 3 m wide.

Matthew is going to cover the patio with paving slabs.
Each paving slab is a square of side 60 cm.

Matthew buys 32 of the paving slabs.

(a) Does Matthew buy enough paving slabs to cover the patio?
You must show all your working.

.....

(3)

The paving slabs cost £8.63 each.

(b) Work out the total cost of the 32 paving slabs.

£ .....

(3)

(Total for Question 15 is 3 marks)

16. Buses to Acton leave a bus station every 24 minutes.
Buses to Barton leave the same bus station every 20 minutes.

A bus to Acton and a bus to Barton both leave the bus station at 9 00 am.

When will a bus to Acton and a bus to Barton next leave the bus station at the same time?

.....

(Total for Question 16 is 3 marks)

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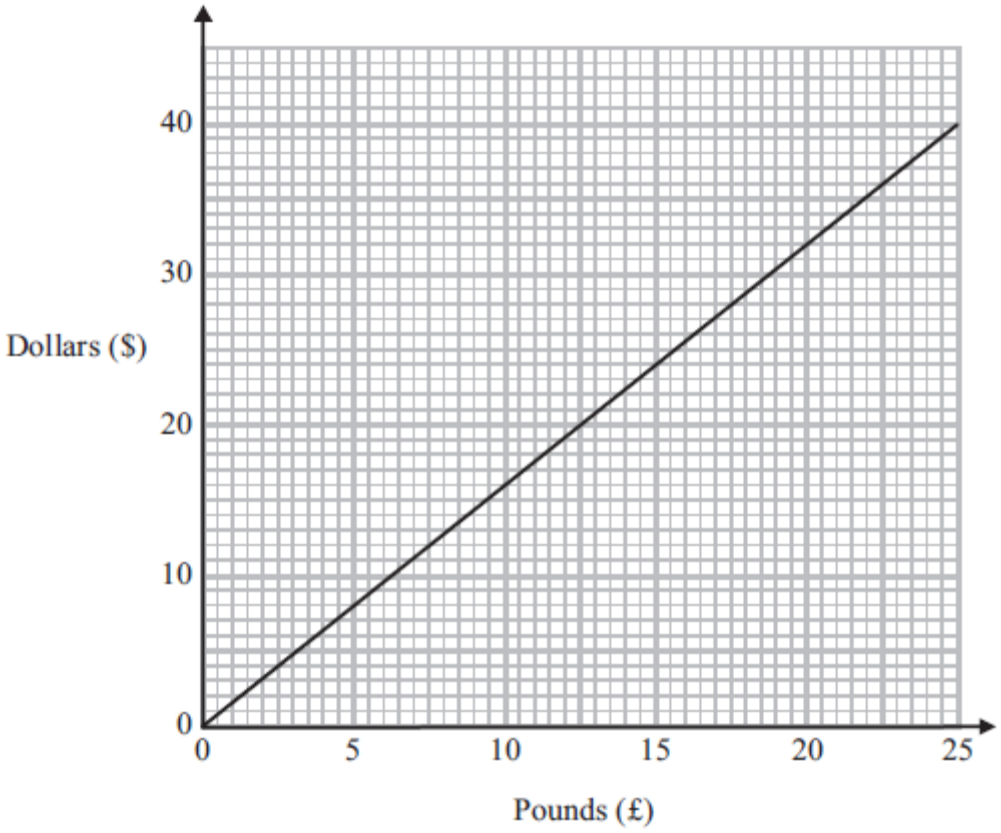
17. You can use this graph to change between pounds (£) and dollars ($).



In London, Sano headphones cost £60
In New York, Sano headphones cost $100

Sano headphones cost more in New York than in London.

How much more?

.....

(Total for Question 17 is 3 marks)

***18.**

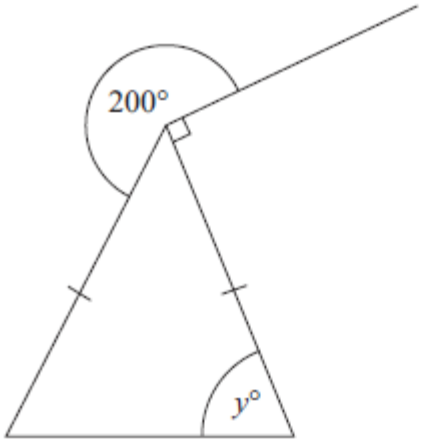
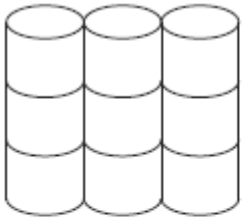


Diagram **NOT** accurately drawn

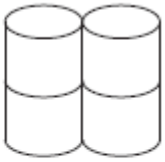
Work out the value of y.
Give reasons for your answer.

(Total for Question 18 is 4 marks)

19.



Pack of 9 toilet rolls £4.23



Pack of 4 toilet rolls £1.96

A pack of 9 toilet rolls costs £4.23
A pack of 4 toilet rolls costs £1.96

Which pack gives the better value for money?

You must show all your working.

.....

(Total for Question 19 is 3 marks)

20. Solve $5w - 6 = 10$

w = ...

(Total for Question 20 is 2 marks)

***21.** Talil is going to make some concrete mix.
He needs to mix cement, sand and gravel in the ratio 1 : 3 : 5 by weight.

Talil wants to make 180 kg of concrete mix.

Talil has

15 kg of cement
85 kg of sand
100 kg of gravel

Does Talil have enough cement, sand and gravel to make the concrete mix?

(Total for Question 21 is 4 marks)

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22. Amy has some toy bricks.
Each brick is a cube of side 1 cm.

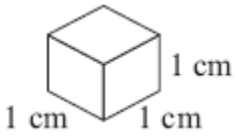
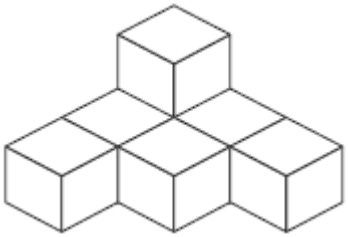


Diagram **NOT** accurately drawn

Amy uses some of the bricks to make this solid shape.



Amy adds some more of the bricks to this solid shape to make a cube of side 3 cm.

How many bricks does Amy add?

.....

(Total for Question 22 is 2 marks)

---

23. (a) Work out $3 + 5 \times 2$

.....

(1)

(b) Write down an estimate for $\sqrt{60}$

.....

(1)

(Total for Question 23 is 2 marks)

---

24. The diagram shows a prism.

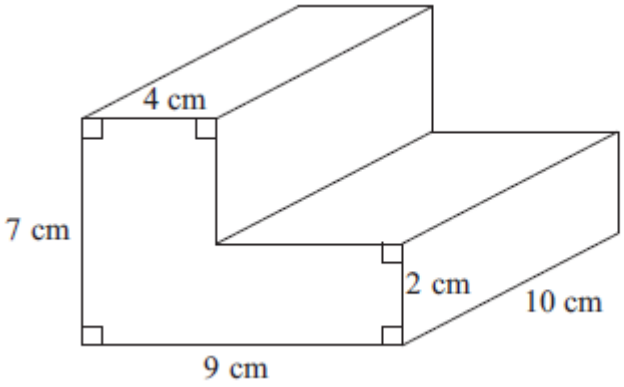


Diagram **NOT** accurately drawn

Work out the volume of the prism.

.....cm^3

(Total for Question 24 is 3 marks)

25. (a) Work out 3^4

.....

(1)

(b) Write down the cube root of 64

.....

(1)

(Total for Question 25 is 2 marks)

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26. Here is a diagram of Jim's garden.

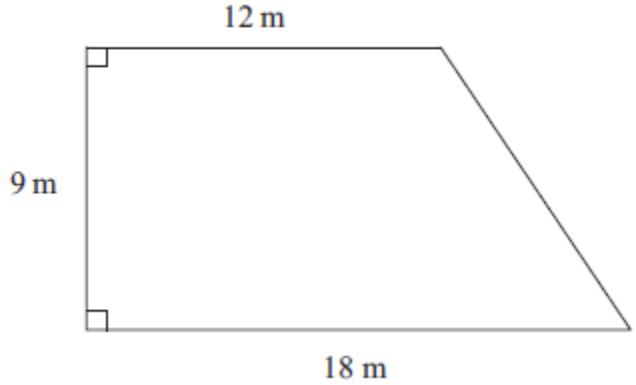


Diagram **NOT** accurately drawn

Jim wants to cover his garden with grass seed to make a lawn.

Grass seed is sold in bags.
There is enough grass seed in each bag to cover 20 m^2 of garden.

Each bag of grass seed costs £4.99

Work out the least cost of putting grass seed on Jim's garden.

£ .....

(Total for Question 26 is 4 marks)

***27.**

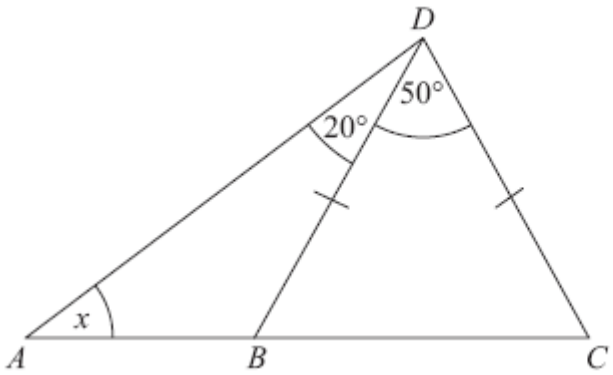


Diagram **NOT** accurately drawn

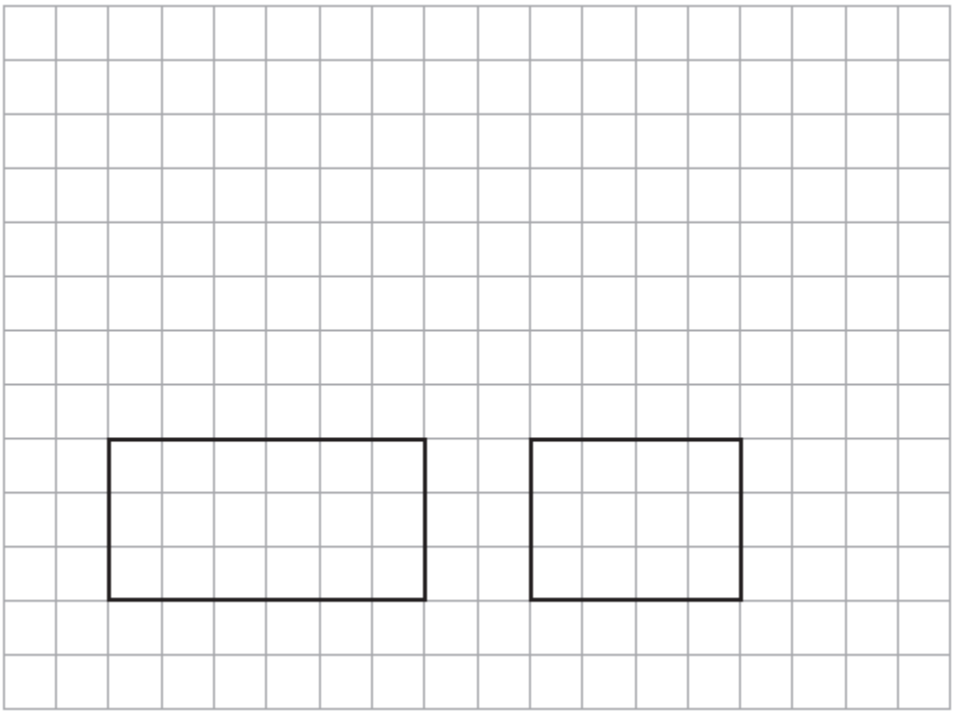
ABC is a straight line.
BD = *CD*.
Angle *BDC* = 50°.
Angle *ADB* = 20°.

Work out the size of the angle marked *x*.
Give reasons for your answer.

(Total for Question 27 is 4 marks)

28. The front elevation and the side elevation of a cuboid are drawn on the grid.

On the grid, draw the plan of the cuboid.



(Total for Question 28 is 2 marks)

29. Here is a map.
The map shows two towns, Burford and Hightown.

Scale: 1 cm represents 10 km

A company is going to build a warehouse.

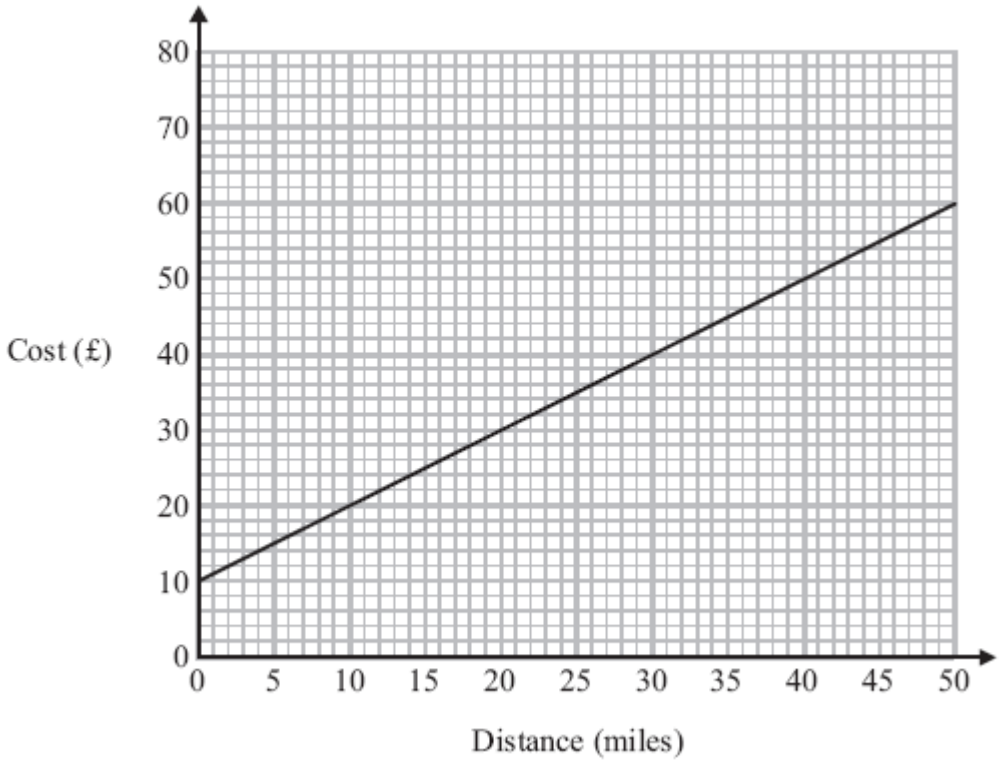
The warehouse will be less than 30 km from Burford **and** less than 50 km from Hightown.

Shade the region on the map where the company can build the warehouse.

(Total for Question 29 is 3 marks)

***30.** Bill uses his van to deliver parcels.
For each parcel Bill delivers there is a fixed charge plus £1.00 for each mile.

You can use the graph to find the total cost of having a parcel delivered by Bill.



(a) How much is the fixed charge?

£ .....

(1)

Ed uses a van to deliver parcels.
For each parcel Ed delivers it costs £1.50 for each mile.
There is **no** fixed charge.

(b) Compare the cost of having a parcel delivered by Bill with the cost of having a parcel delivered by Ed.

(3)

(Total for Question 30 is 4 marks)

31. Make h the subject of the formula

$$t = \frac{gh}{10}$$

$h =$ .....

(2)

(Total for Question 31 is 2 marks)

32.

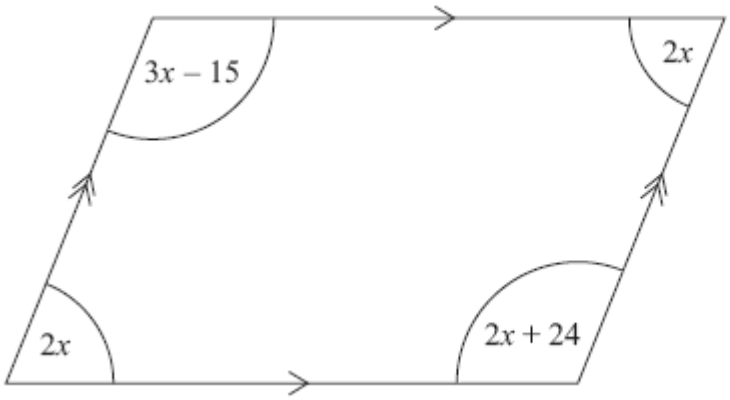


Diagram **NOT** accurately drawn

The diagram shows a parallelogram.
The sizes of the angles, in degrees, are

$2x$
$3x - 15$
$2x$
$2x + 24$

Work out the value of x.

x = ...

(Total for Question 32 is 3 marks)

TOTAL FOR PAPER IS 100 MARKS