

Write your name here

Surname	Other names
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Centre Number	Candidate Number									
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# Edexcel GCSE

# Mathematics A

## Paper 2 (Calculator)

## Practice Papers Set D

## Foundation Tier

<b>Time: 1 hour 45 minutes</b>	Paper Reference <b>1MA0/2F</b>
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**You must have:** Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser, calculator. Tracing paper may be used.

	Total Marks
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### 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

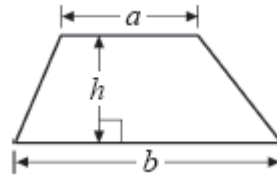
- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

## GCSE Mathematics 1MA0

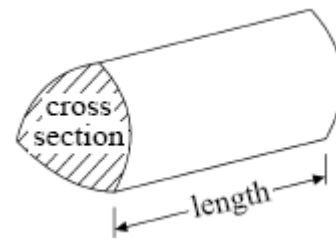
Formulae: Foundation Tier

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

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



$$\text{Volume of prism} = \text{area of cross section} \times \text{length}$$



**Answer ALL THIRTY THREE questions.**

**Write your answers in the spaces provided.**

**You must write down all stages in your working.**

1. Kaz rolled a dice 10 times.

Here are her scores.

2    6    5    4    4    2    1    3    4    3

Work out the mean.

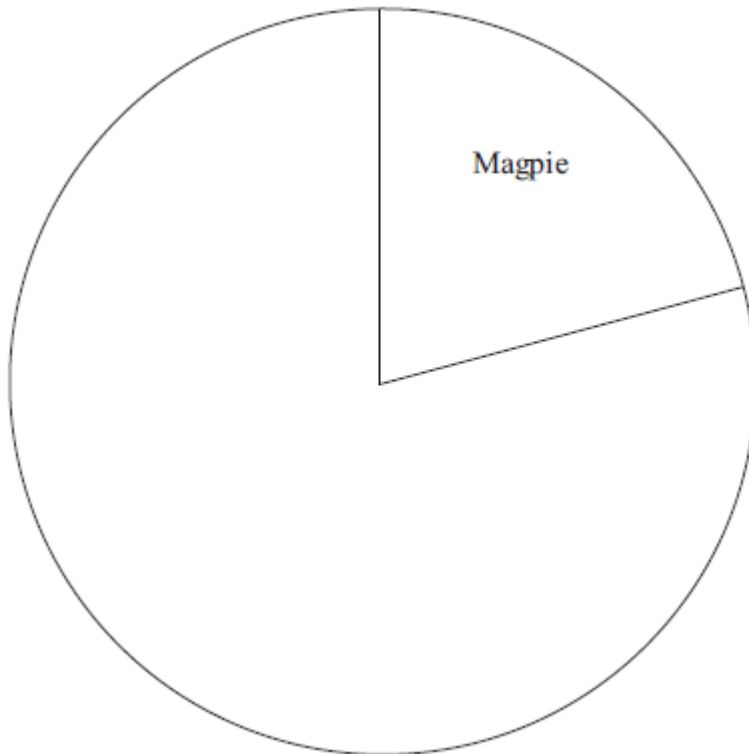
.....  
**(Total for Question 1 is 2 marks)**

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2. The table gives some information about the birds Paula sees in her garden one day.

Bird	Frequency
Magpie	15
Thrush	10
Starling	20
Sparrow	27

Complete the accurate pie chart.



(Total for Question 2 is 3 marks)

- \*3. Potatoes cost £9 for a 12.5 kg bag at a farm shop.  
The same type of potatoes cost £1.83 for a 2.5 kg bag at a supermarket.

Where are the potatoes the better value, at the farm shop or at the supermarket?  
You must show your working.

(Total for Question 3 is 4 marks)

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4. Sue has a bag of 18 sweets.

5 of the sweets are blue  
7 of the sweets are red  
6 of the sweets are green

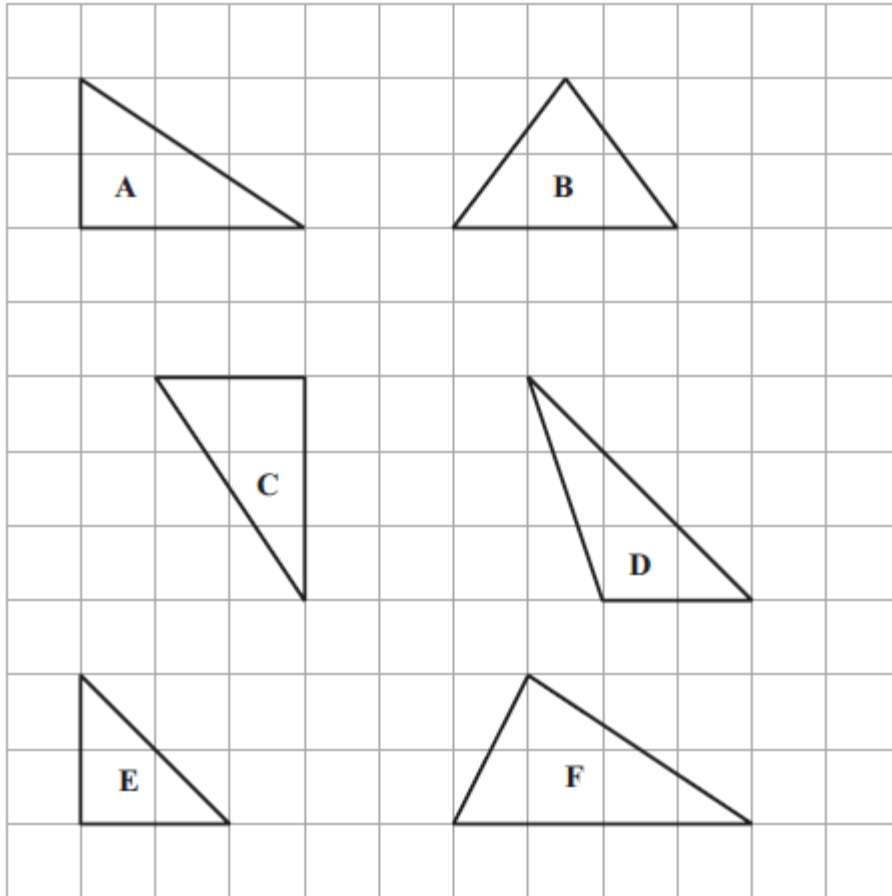
Sue takes at random a sweet from the bag.

Write down the probability that Sue does **not** take a green sweet.

.....  
(Total for Question 4 is 1 mark)

---

5. Here are 6 triangles drawn on a grid of centimetre squares.



Write down the letter of an isosceles triangle.

.....  
(Total for Question 5 is 1 mark)

6. Use a calculator to work out

$$\frac{\sqrt{20.4}}{6.2 \times 0.48}$$

Write down all the figures on your calculator display.  
Give your answer as a decimal.

.....  
(Total for Question 6 is 2 marks)

\*7. The table gives information about the costs of posting parcels.

Maximum weight of a parcel	Cost
2 kg	£4.41
4 kg	£7.06
6 kg	£9.58
8 kg	£11.74
10 kg	£12.61
20 kg	£14.69

Umar has to post some parcels.

He has to post

- 3 parcels with a weight of 6 kg each
- 1 parcel with a weight of 10 kg
- 1 parcel with a weight of 3 kg
- 1 parcel with a weight of 1.2 kg

Umar has £55 to spend on posting the parcels.

Can he post all the parcels?

(Total for Question 7 is 4 marks)

8. Jamal has a biased coin.  
He is going to throw the coin 200 times.  
The probability of getting heads is 0.7

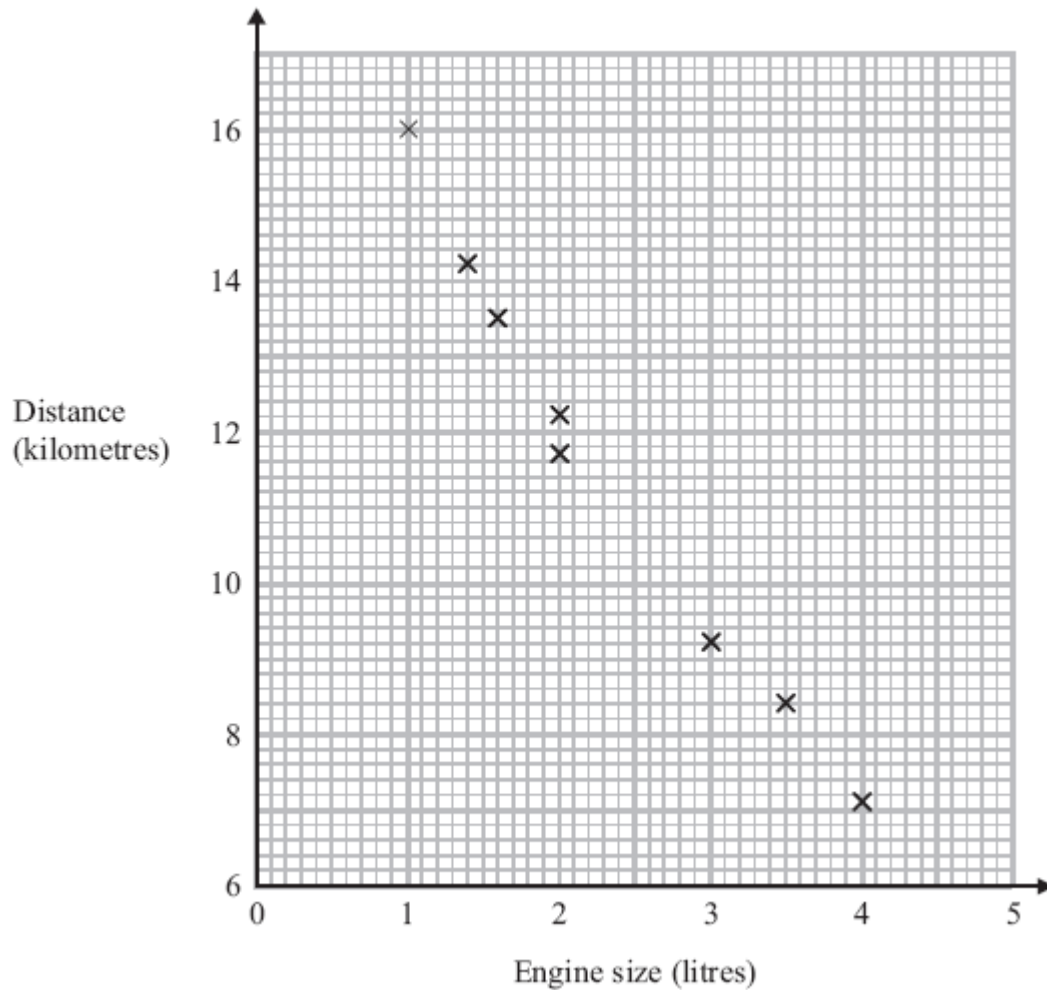
Work out an estimate for the number of heads Jamal will get.

.....  
**(Total for Question 8 is 2 marks)**

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9. The scatter graph shows some information about 8 cars. For each car it shows the engine size, in litres, and the distance, in kilometres, the car travels on one litre of petrol.



- (a) What type of correlation does the scatter graph show?

.....  
(1)

A different car of the same type has an engine size of 2.5 litres.

- (b) Estimate the distance travelled on one litre of petrol by this car.

..... kilometres  
(2)

**(Total for Question 9 is 3 marks)**

- 10.** Linda is going on holiday to the Czech Republic.  
She needs to change some money into koruna.

She can only change her money into 100 koruna notes.

Linda only wants to change up to £200 into koruna.  
She wants as many 100 koruna notes as possible.

The exchange rate is £1 = 25.82 koruna.

- (a) How many 100 koruna notes should she get?

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

Linda buys a meal in the Czech Republic.  
The meal costs 400 koruna.

- (b) Work out the cost of the meal in pounds.

£.....  
**(3)**

**(Total for Question 10 is 6 marks)**

11. (a) Change 4 kg to grams.

..... grams  
(1)

(b) Change 3500 ml to litres.

..... litres  
(1)

**(Total for Question 11 is 2 marks)**

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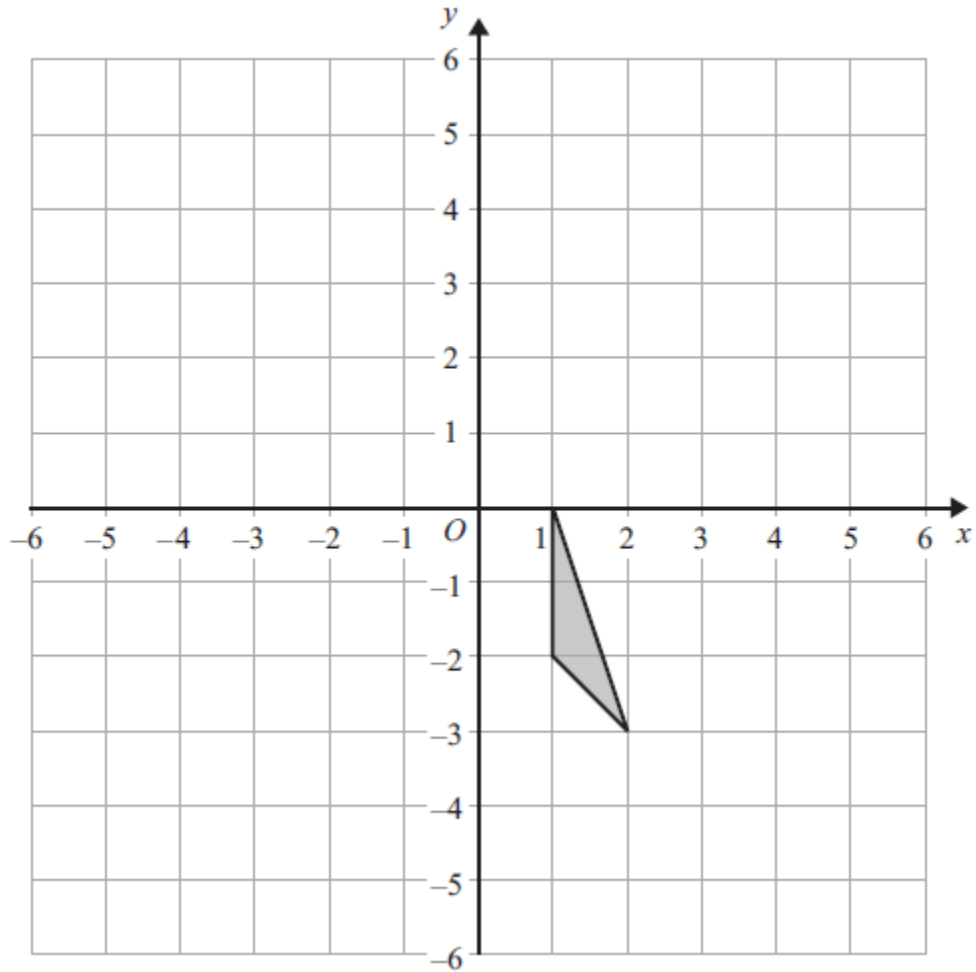
12. Solve  $4m + 6 = 15$

$m =$  .....

**(Total for Question 12 is 2 marks)**

---

13.

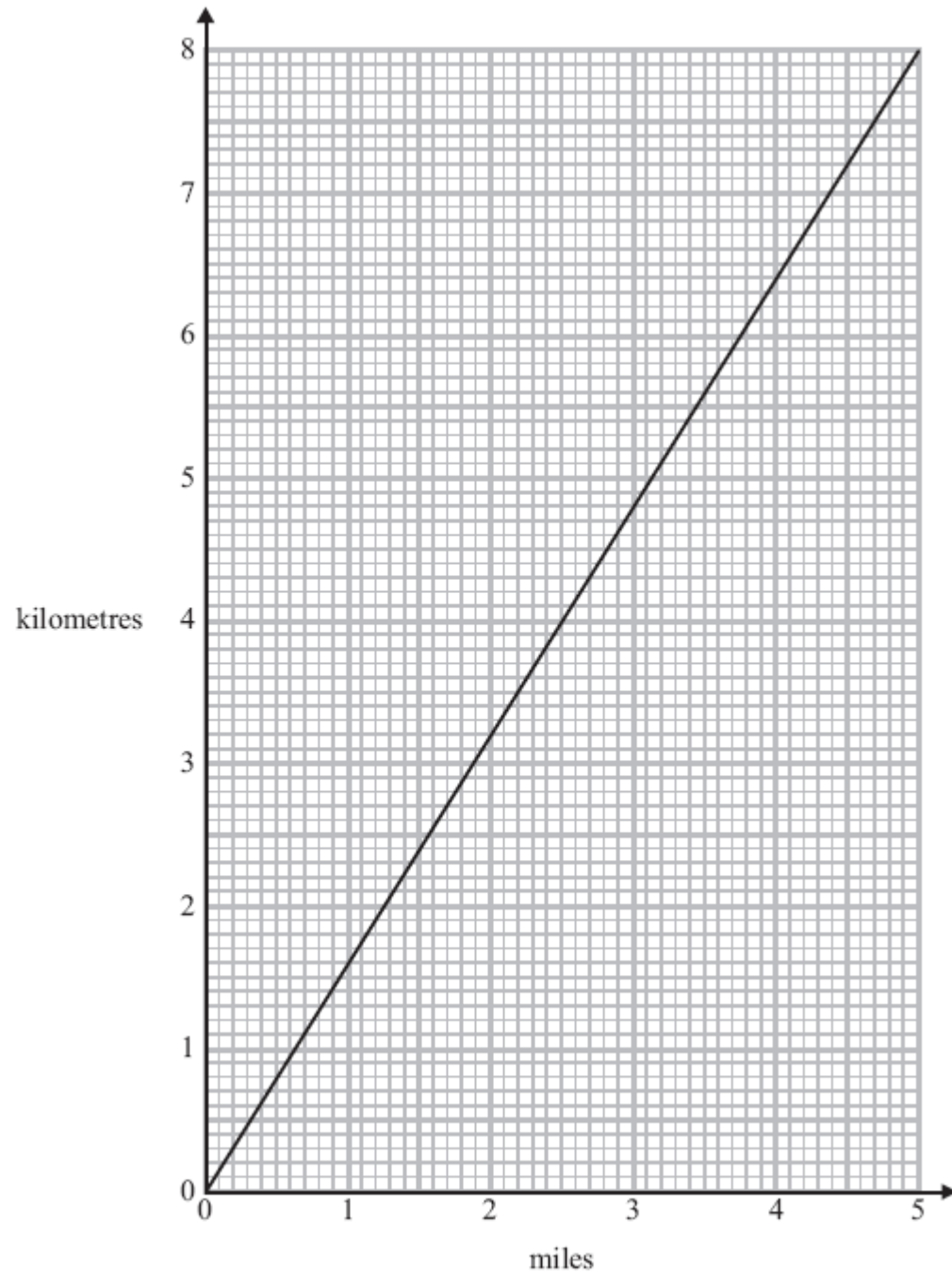


Translate the triangle by  $\begin{pmatrix} -3 \\ 2 \end{pmatrix}$

(Total for Question 13 is 2 marks)

---

14. You can use the graph to change between miles and kilometres.



Change 60 kilometres into miles.

..... miles  
(Total for Question 14 is 2 marks)

15. Rani has 250 DVDs.

42% of her DVDs are thrillers.

$\frac{2}{5}$  of her DVDs are comedies.

The rest of her DVDs are science fiction.

How many science fiction DVDs does Rani have?

.....  
**(Total for Question 15 is 4 marks)**

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16. Here is a cuboid.

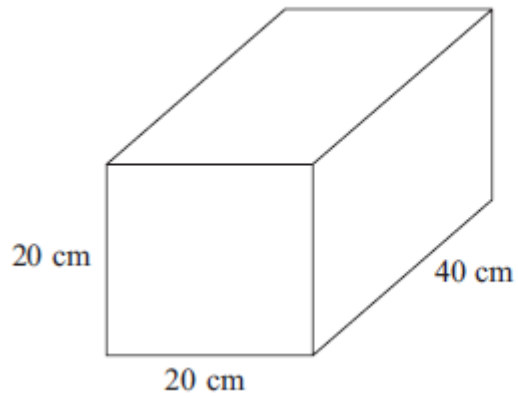


Diagram **NOT**  
accurately drawn

Work out the volume of the cuboid.

.....  
(Total for Question 16 is 3 marks)

---

17. The diagram shows part of a net of a cube.



Write down the number of edges that the cube has.

.....

**(Total for Question 17 is 1 mark)**

---

18.  $P = 3.5x - y$

- (a) Work out the value of  $P$  when  $x = 12$  and  $y = 5$

.....

(2)

- (b) Work out the value of  $P$  when  $x = -9$  and  $y = -6$

.....

(2)

**(Total for Question 18 is 4 marks)**

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\*19. Here is a diagram of a wall.

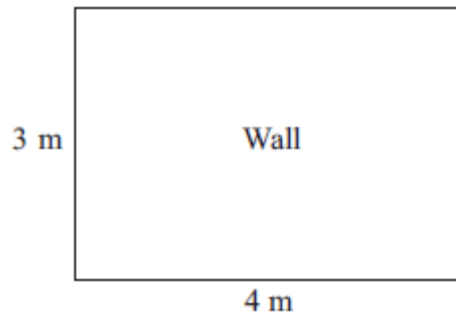
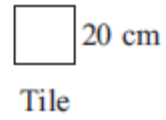


Diagram **NOT**  
accurately drawn



Halima wants to cover all of the wall with tiles.

The tiles are squares with sides of length 20 cm.

The tiles are sold in packs.

There are 10 tiles in each pack.

Each pack of tiles costs £34.99

Halima only has £1000

Can she buy enough packs of tiles to cover the wall?

**(Total for Question 19 is 6 marks)**

**20.**  $y = 4x + c$

$y = 18.8$

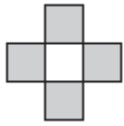
$c = -2.4$

Work out the value of  $x$ .

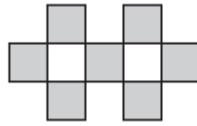
.....  
**(Total for Question 20 is 2 marks)**

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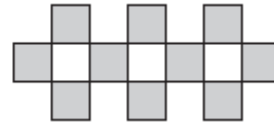
21. Here are some patterns made from grey tiles.



Pattern number 1



Pattern number 2



Pattern number 3

(a) How many grey tiles are needed for Pattern number 10?

.....  
(2)

Jenny says,

‘I will need exactly 46 grey tiles for Pattern number 18’.

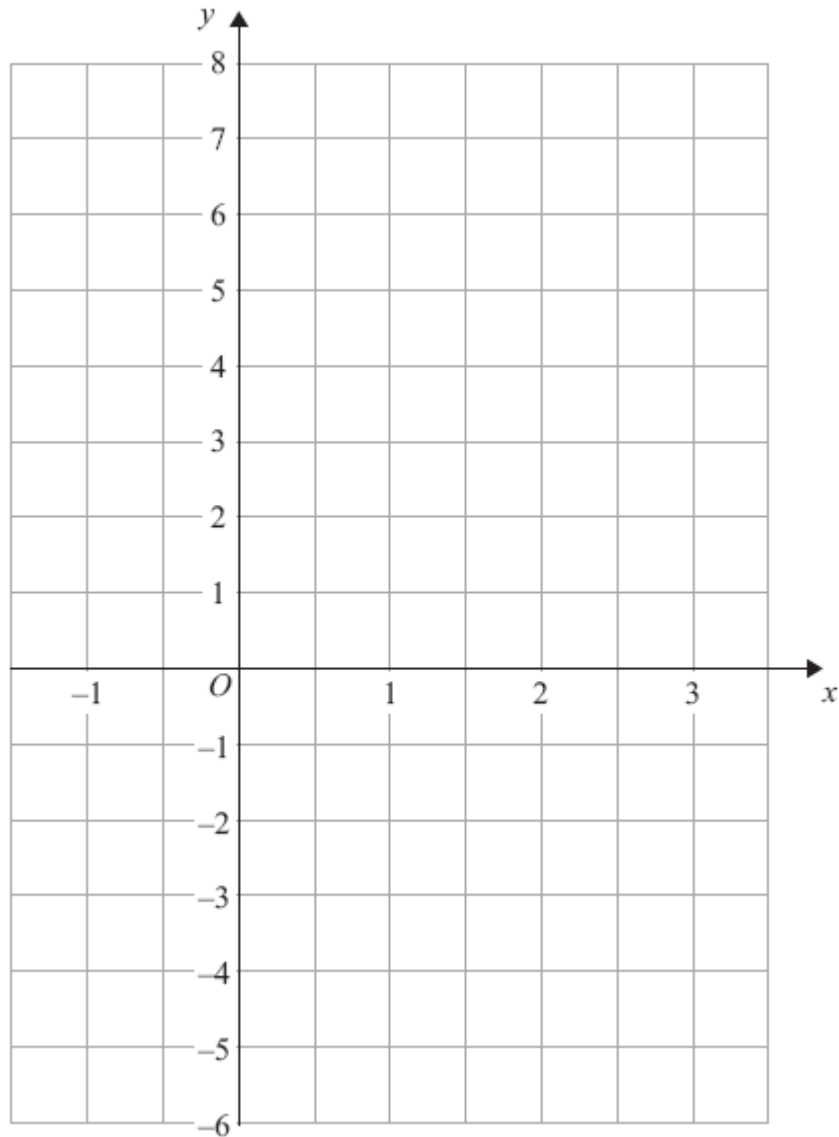
(b) Is Jenny right?

You must give a reason for your answer.

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

**(Total for Question 21 is 4 marks)**

22. On the grid, draw the graph of  $y = 3x - 2$  for values of  $x$  from  $-1$  to  $3$



(Total for Question 22 is 3 marks)

23. (a) Factorise  $4x + 10y$

.....  
(1)

(b) Factorise  $x^2 + 7x$

.....  
(1)

**(Total for Question 23 is 2 marks)**

---

**\*24.** Henry is thinking about having a water meter.

These are the two ways he can pay for the water he uses.

**Water Meter**

A charge of £28.20 per year

**plus**

91.22p for every cubic metre of water used

**1 cubic metre = 1000 litres**

**No Water Meter**

A charge of £107 per year

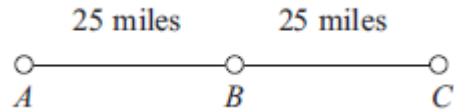
Henry uses an average of 180 litres of water each day.

Henry wants to pay as little as possible for the water he uses.  
Should Henry have a water meter?

**(Total for Question 24 is 5 marks)**

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25.



$A$ ,  $B$  and  $C$  are 3 service stations on a motorway.

$AB = 25$  miles

$BC = 25$  miles

Aysha drives along the motorway from  $A$  to  $C$ .

Aysha drives at an average speed of 50 mph from  $A$  to  $B$ .

She drives at an average speed of 60 mph from  $B$  to  $C$ .

Work out the difference in the time Aysha takes to drive from  $A$  to  $B$  and the time Aysha takes to drive from  $B$  to  $C$ .

Give your answer in minutes.

..... minutes

**(Total for Question 25 is 3 marks)**

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\*26.

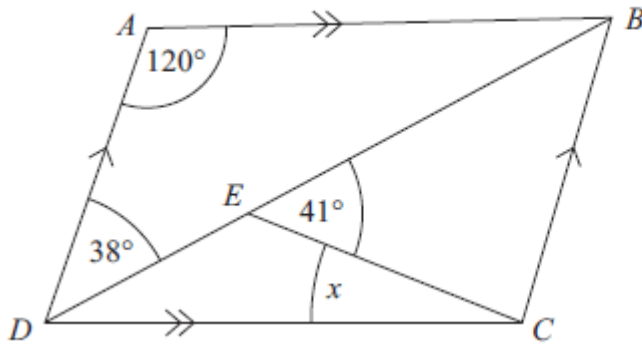


Diagram **NOT**  
accurately drawn

$ABCD$  is a parallelogram.

Angle  $ADB = 38^\circ$ .

Angle  $BEC = 41^\circ$ .

Angle  $DAB = 120^\circ$ .

Calculate the size of angle  $x$ .

You must give reasons for your answer.

(Total for Question 26 is 4 marks)



\*27. Mr Weaver's garden is in the shape of a rectangle.

In the garden

there is a patio in the shape of a rectangle  
and two ponds in the shape of circles with diameter 3.8 m.

The rest of the garden is grass.

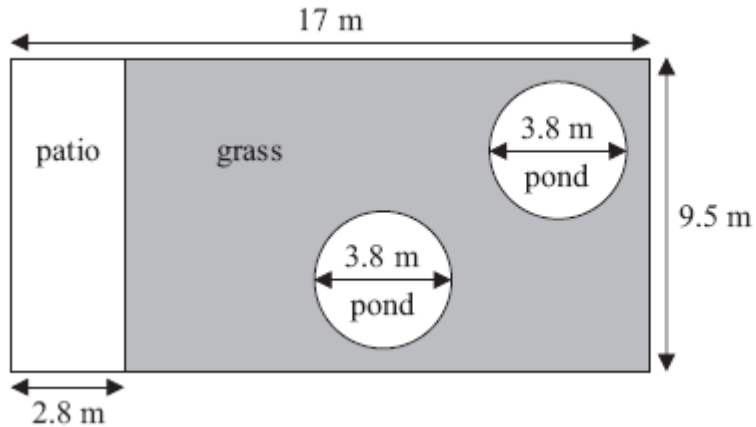


Diagram **NOT**  
accurately drawn

Mr Weaver is going to spread fertiliser over all the grass.  
One box of fertiliser will cover 25 m<sup>2</sup> of grass.

How many boxes of fertiliser does Mr Weaver need?  
You must show your working.

(Total for Question 27 is 5 marks)

28. Pat and Julie share some money in the ratio 2 : 5  
Julie gets £45 more than Pat.

How much money did Pat get?

£.....  
(Total for Question 28 is 3 marks)

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29.

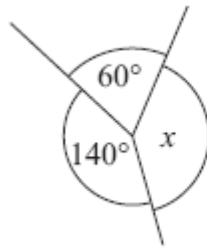


Diagram NOT  
accurately drawn

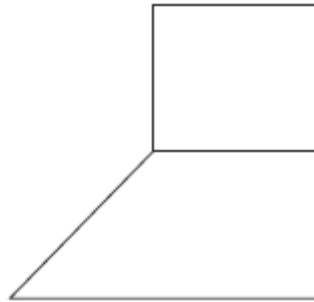
The angle marked  $x$  is  $160^\circ$ . How do you know this?

.....  
.....

(Total for Question 29 is 1 mark)

---

30. Here is a square and a trapezium.



(a) Mark, with the letter O, an obtuse angle.

(1)

(b) Find two lines that are perpendicular.  
Mark each of these lines with a letter P.

(1)

**(Total for Question 30 is 2 marks)**

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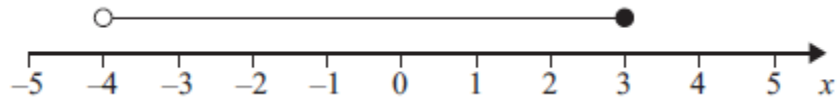
31. (a)  $n$  is an integer.

$$-1 \leq n < 4$$

List the possible values of  $n$ .

.....  
(2)

(b)



Write down the inequality shown in the diagram.

.....  
(2)

(c) Solve  $3y - 2 > 5$

.....  
(2)

**(Total for Question 31 is 6 marks)**

---

32. The pie charts show some information about the numbers of medals won by Germany and by the Russian Federation in the 2010 Winter Olympics.

Medals won by Germany



Medals won by the Russian Federation



Germany won 7 bronze medals.

- (a) How many gold medals did Germany win?

.....  
(2)

- (b) Graham says,

‘The pie charts show that Germany won more gold medals than the Russian Federation’.

Is Graham right? .....

You must explain your answer.

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

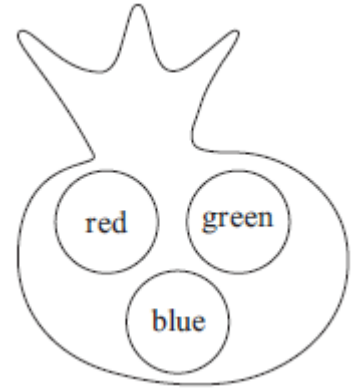
**(Total for Question 32 is 3 marks)**

33. There are 3 counters in a bag.

One counter is red.  
One counter is green.  
One counter is blue.

Mike takes at random a counter from the bag.  
He puts the counter back in the bag.

Then Ellie takes at random a counter from the bag.



(a) Write a list of all the possible combinations of the two counters that Mike and Ellie can take.

.....

.....

(2)

(b) Find the probability that Mike takes a blue counter and then Ellie takes a green counter.

.....

(1)

**(Total for Question 33 is 3 marks)**

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**TOTAL FOR PAPER IS 100 MARKS**