

Please check the examination details below before entering your candidate information

Candidate surname

Other names

Centre Number

Candidate Number

**Pearson Edexcel**  
**Level 1/Level 2 GCSE (9–1)**

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# Mock Set 4 – Autumn 2018

Time: 1 hour 30 minutes

Paper Reference **1MA1/1F**

## Mathematics

**Paper 1 (Non-Calculator)**  
**Foundation Tier**

**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.*
- You must **show all your working**.
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- **Calculators may not be used.**



### Information

- The total mark for this paper is 80
- The marks for **each** question are shown in brackets  
– *use this as a guide as to how much time to spend on each question.*

### 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.

Turn over ►

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Answer ALL questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

1 Write the following numbers in order of size.

Start with the smallest number.



4.36

4.3

4.06

4.306

.....

(Total for Question 1 is 1 mark)

2 Write  $\frac{3}{100}$  as a decimal.



.....

(Total for Question 2 is 1 mark)

3 Work out  $3 + 20 \div 5$



.....

(Total for Question 3 is 1 mark)

4 Change 7500 grams into kilograms.



..... kilograms

(Total for Question 4 is 1 mark)

5 Write  $\frac{6}{15}$  as a fraction in its simplest form.



.....

(Total for Question 5 is 1 mark)

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6 The table gives the height of each of five buildings in England.



Building	Height (m)
Heron Tower	230
CIS Tower	118
Tower 42	183
The Shard	310
Leadenhall	225

Fran says,

“The Heron Tower is more than twice as high as the CIS Tower.”

Fran is wrong.  
Explain why.

.....

.....

.....

(Total for Question 6 is 1 mark)

7 Here is a list of 10 numbers.



1    3    3    5    5    7    8    8    8    12

(a) Work out the range.

.....

(1)

(b) Find the mode.

.....

(1)

One of the 10 numbers is picked at random.

(c) Write down the probability that this number is 7

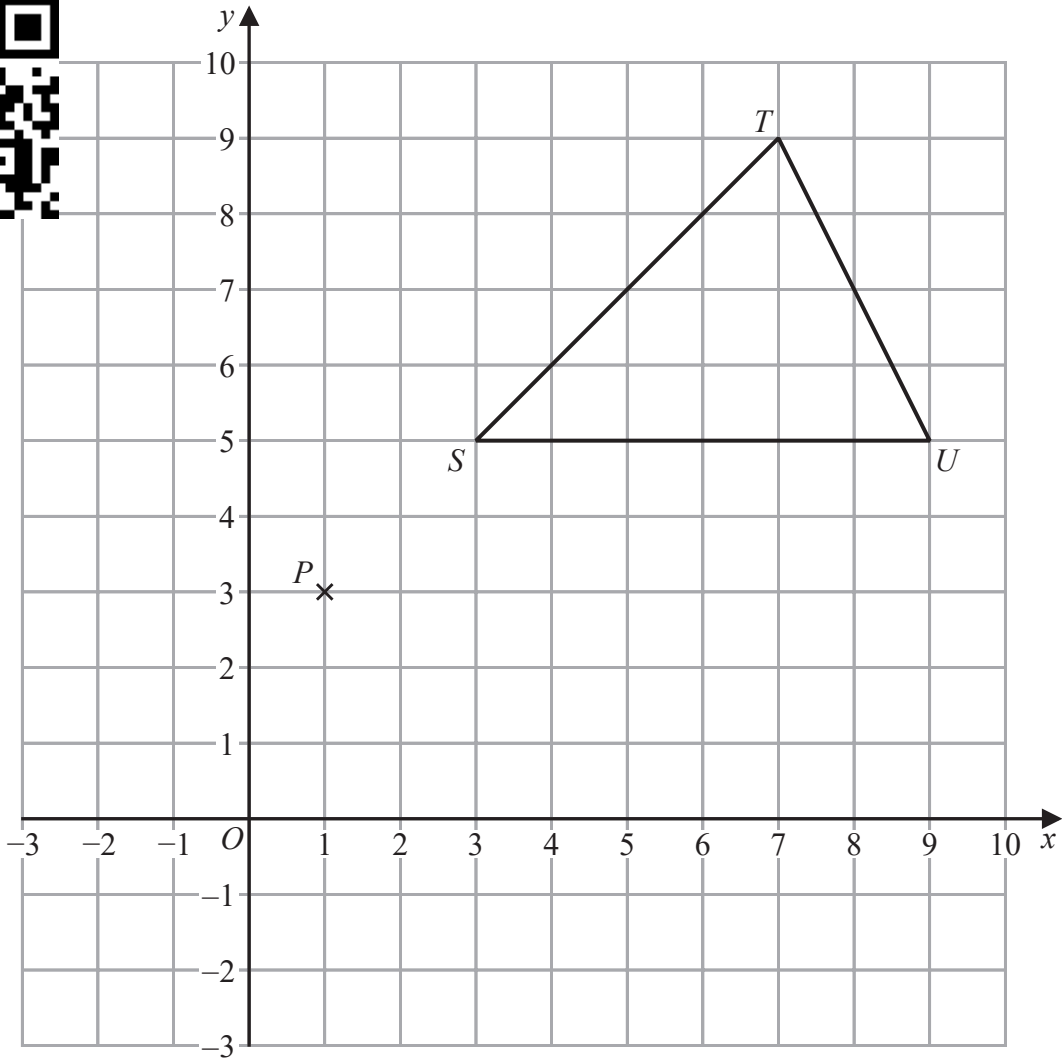
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(1)

(Total for Question 7 is 3 marks)



8 Here is a centimetre grid.



(a) Write down the coordinates of the point  $P$ .

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

(b) Plot the point with coordinates  $(-1, -2)$   
Label this point  $R$ .

(1)

(c) Find the area of triangle  $STU$ .

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

(Total for Question 8 is 4 marks)

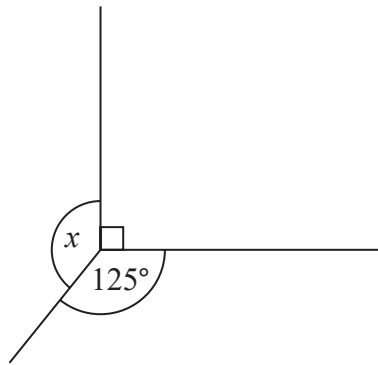


9 Write down all the prime numbers between 15 and 30



.....  
(Total for Question 9 is 2 marks)

10



Work out the size of the angle marked  $x$ .

.....  
(Total for Question 10 is 2 marks)



11 A road map has a scale of 1 : 30 000

The length of a road on the map is 7 cm.

Work out the length, in kilometres, of the real road.



..... kilometres

(Total for Question 11 is 3 marks)

12 Ria buys

2 packets of biscuits costing £1.40 each

2 cakes costing £1.50 each

3 bottles of orange juice costing £1.10 each

Ria pays with a £10 note.

Work out how much change Ria should get.



.....

(Total for Question 12 is 3 marks)

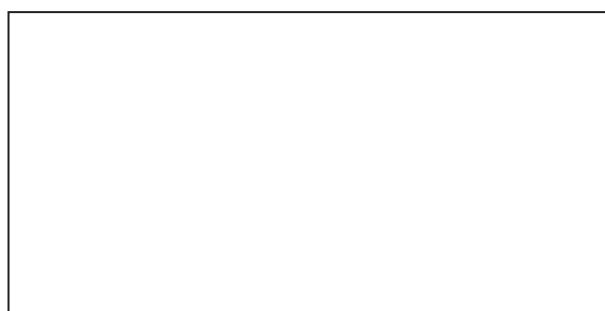


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13 Here is a scale diagram of part of a wall.



Scale: 4 cm represents 1 m

Kamran is going to cover this part of the wall with square tiles.  
Each tile has sides of length 10 cm.

The tiles cost 25p each.  
Kamran spends £60 on tiles.

Show that Kamran has bought enough tiles.

(Total for Question 13 is 4 marks)



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14 Tim works for a company.  
His normal rate of pay is £10 per hour.

On Friday Tim worked 4 hours overtime.

His overtime rate of pay is  $1\frac{1}{2}$  times his normal rate of pay.

Work out how much money Tim was paid for his overtime on Friday.

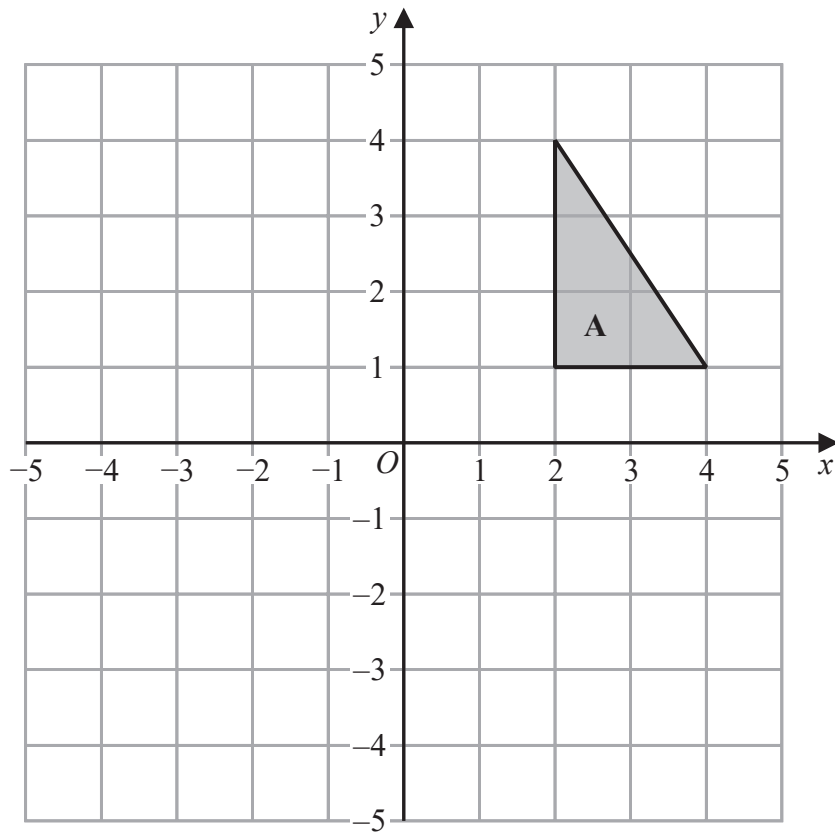


£ .....

(Total for Question 14 is 3 marks)





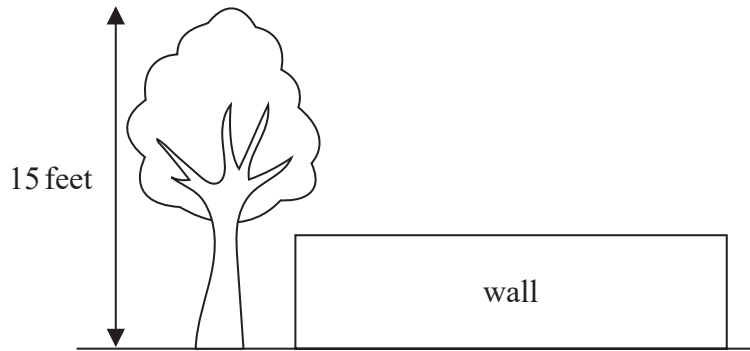


Reflect triangle A in the  $y$ -axis.

(Total for Question 15 is 2 marks)



16 The accurate scale drawing shows a tree and a wall.



The tree is 15 feet tall.

The tree and the wall are drawn to the same scale.

Find an estimate for the height, in feet, of the wall.

..... feet

**(Total for Question 16 is 2 marks)**

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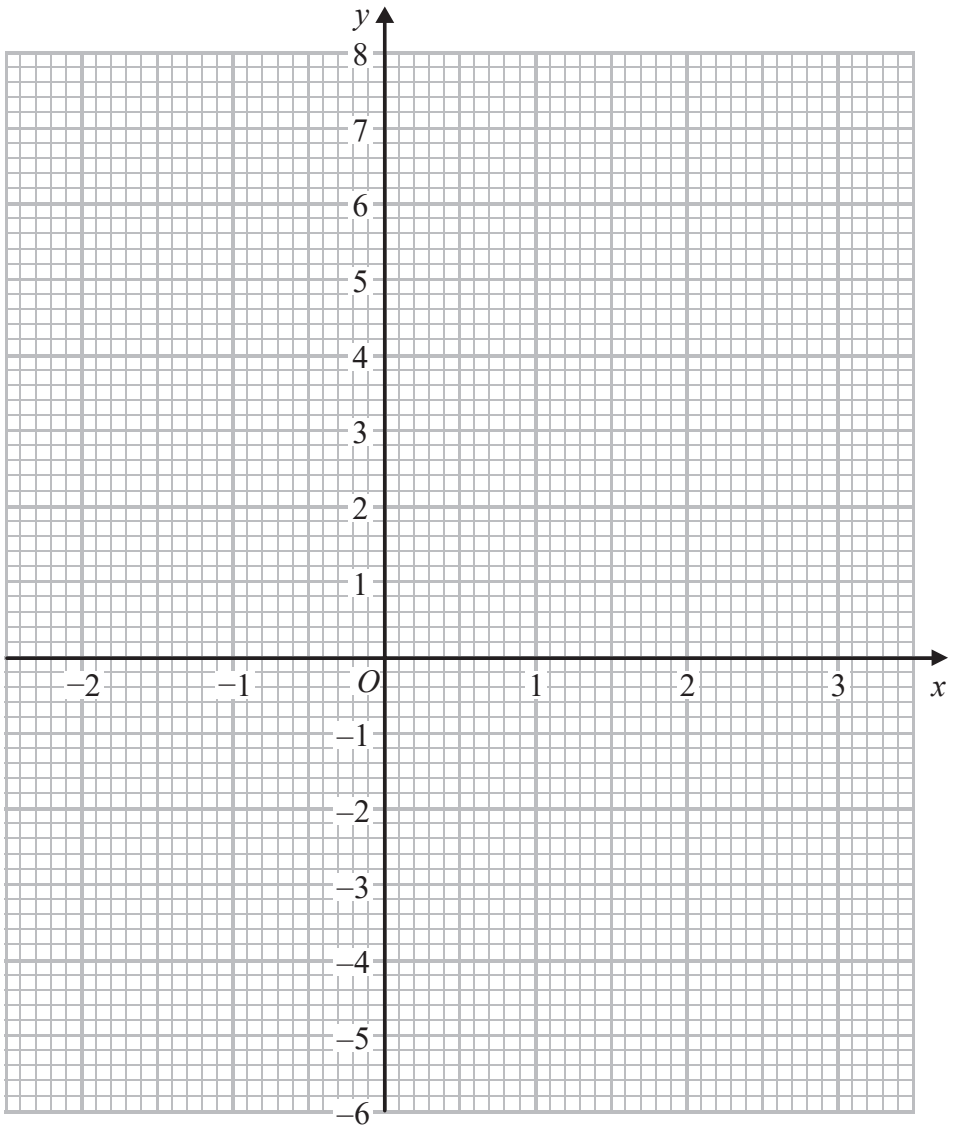


17 (a) Complete the table of values for  $y = 2x - 1$

$x$	-2	-1	0	1	2	3
$y$		-3				5

(2)

(b) On the grid, draw the graph of  $y = 2x - 1$  for values of  $x$  from -2 to 3



(2)

(c) Use your graph to find the value of  $x$  when  $y = 0.4$

.....  
(1)

(Total for Question 17 is 5 marks)



18 (a) Work out  $\frac{1}{7} \div \frac{3}{4}$

.....  
(2)

(b) Work out  $\frac{1}{4} + \frac{1}{5}$

.....  
(2)



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

19 Adam, Bethany and Charles played a game.

Adam scored 8 more points than Charles.

Bethany scored 5 more points than Adam.

They scored a total of 72 points.

Find the number of points that Adam, Bethany and Charles each scored.



Adam.....

Bethany.....

Charles.....

**(Total for Question 19 is 4 marks)**

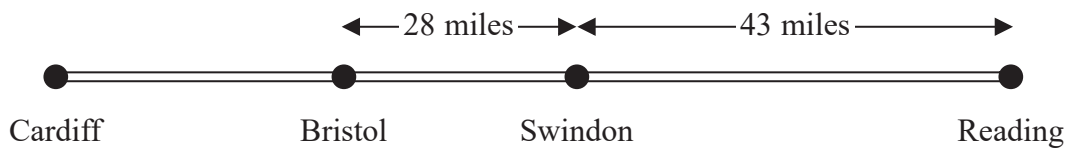


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20 The diagram shows some information about the distances, in miles, between four towns.



David leaves Reading at 11 45 am.  
He arrives in Cardiff at 1 45 pm.

David drives at an average speed of 56 miles per hour.

Work out the distance between Bristol and Cardiff.



..... miles

(Total for Question 20 is 4 marks)



21 Write 136 as a product of its prime factors.



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.....  
(Total for Question 21 is 3 marks)



22 A biased spinner can land on red, on blue, on green or on yellow.

John is going to spin the spinner.

The table shows each of the probabilities that the spinner will land on red, on blue or on green.

<b>Colour</b>	red	blue	green	yellow
<b>Probability</b>	0.2	0.25	0.15	

(a) Complete the table.



(2)

Hayley is going to spin the spinner 60 times.

(b) Work out an estimate for the number of times the spinner will land on red.

.....  
(2)

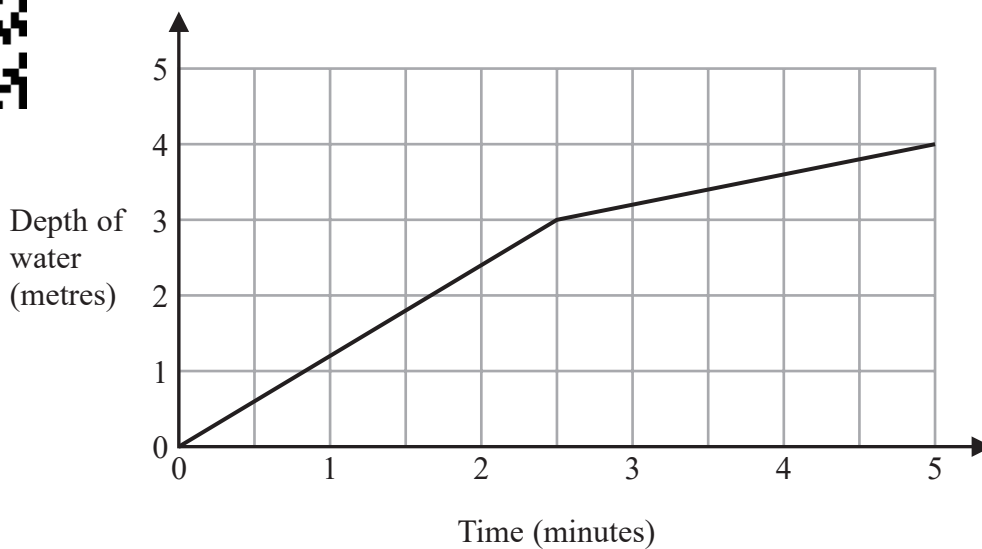
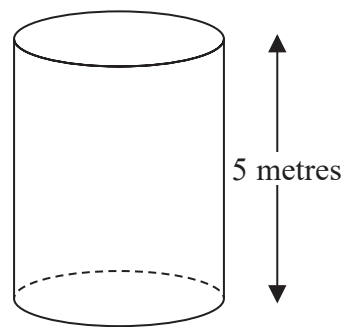
**(Total for Question 22 is 4 marks)**



23 An empty tank is a cylinder of height 5 metres.

Water is poured into the tank at a constant rate.  
It takes 4 minutes to fill the tank completely with water.

Malcolm draws this graph to show the depth of water in the tank as water is poured into the tank.



Write down two things wrong with this graph.

1.....

.....

.....

2.....

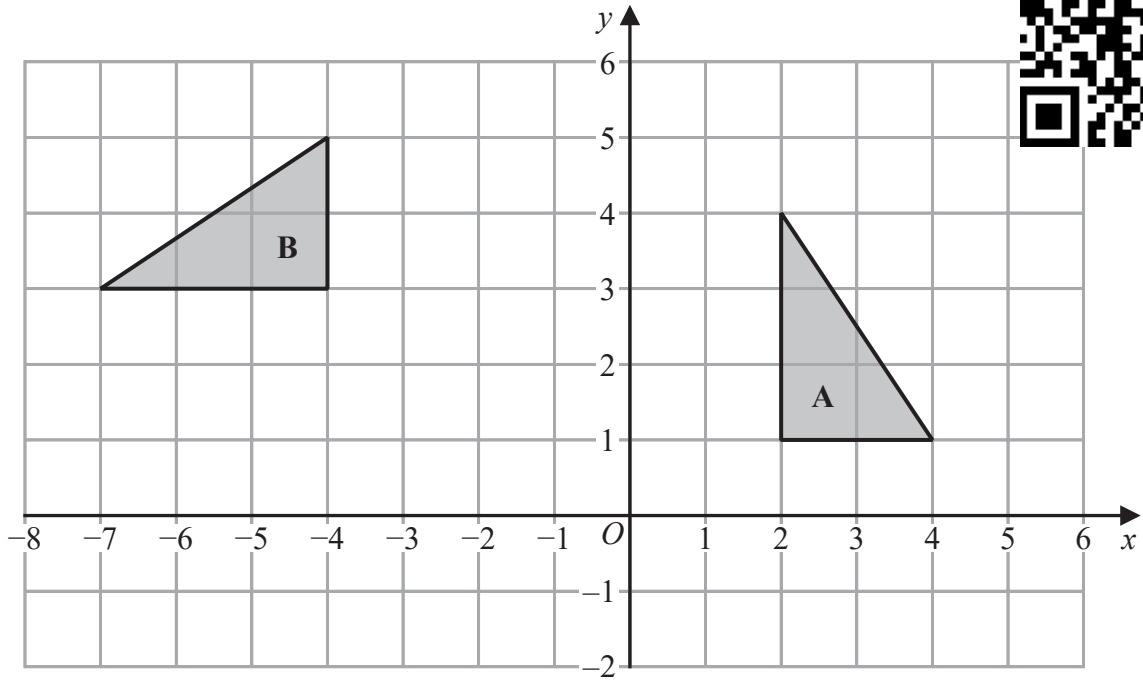
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(Total for Question 23 is 2 marks)







Describe fully the single transformation that maps triangle **A** onto triangle **B**.

(Total for Question 24 is 2 marks)



25 This accurate diagram shows three points  $A$ ,  $B$  and  $C$ .



$A$  ×

×  $B$

×  
 $C$

Region **R** contains all the points that are

less than 4 cm from each of the points  $A$  and  $C$   
and nearer to point  $B$  than to point  $A$

Show, by shading, the region **R**.

(Total for Question 25 is 3 marks)

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26 Each student at a college is going to be given a notebook.

The colour of each notebook will be red or blue or green or orange.

Bill takes a sample of 50 of the students at the college.  
He asks each of these students what colour of notebook they want.

The table gives Bill's results.

<b>Notebook colour</b>	red	blue	green	orange
<b>Number of students</b>	18	16	10	6

There are 3000 students at the college.

(a) Work out how many red notebooks Bill should buy.

.....  
(2)

(b) Write down one assumption that you made in answering part (a).  
Explain how your answer would be affected if this assumption were not true.

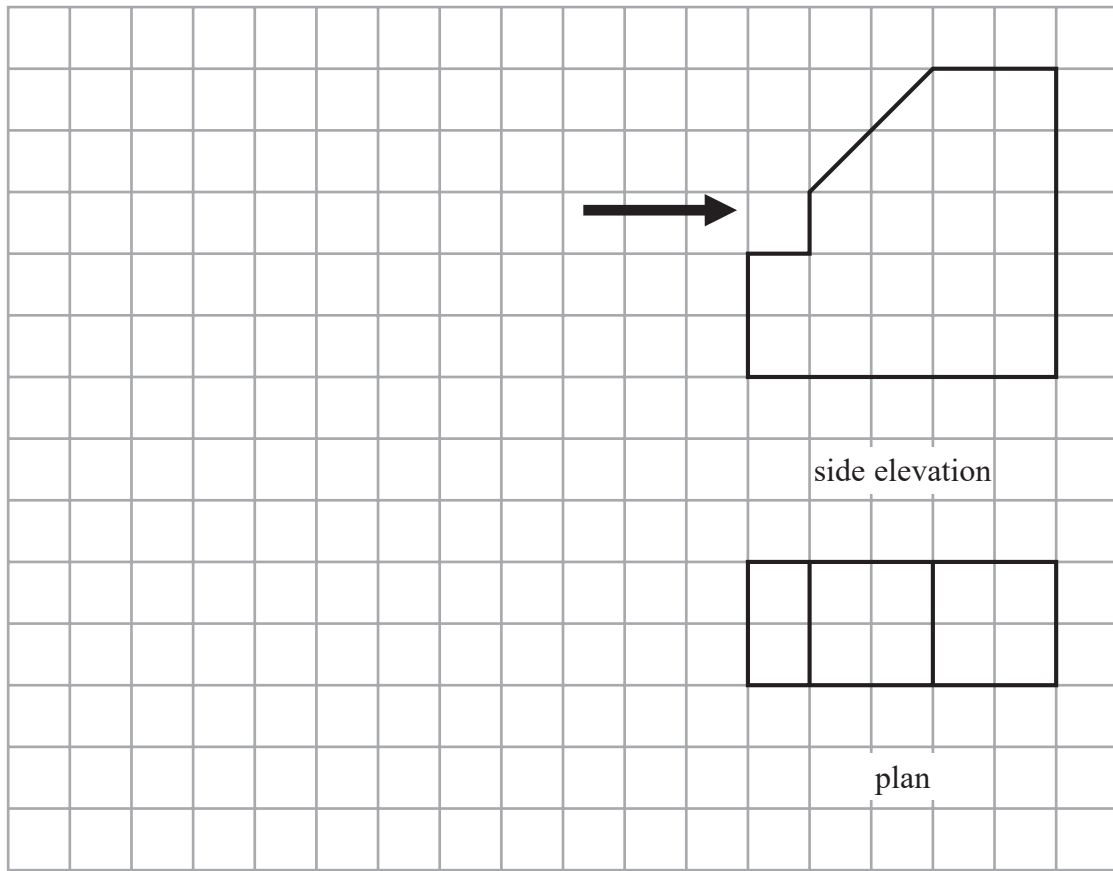
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.....  
(1)

**(Total for Question 26 is 3 marks)**



27 The plan and side elevation of a solid prism are shown on the grid.

On the grid, draw the front elevation of the prism from the direction of the arrow.



(Total for Question 27 is 2 marks)



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28 Cars are made in a factory for 24 hours every day.

In the factory a car is made every 209 seconds.

- (a) Work out an estimate for the number of cars made in the factory in one year.  
You must show how you get your answer.



.....  
(4)

- (b) Is your answer to part (a) an underestimate or an overestimate?  
Give a reason for your answer.

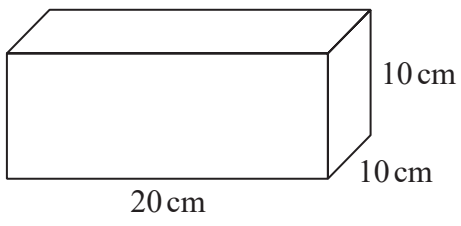
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(1)

(Total for Question 28 is 5 marks)



S 5 9 7 2 5 A 0 2 1 2 2

29 The diagram shows a block of silver in the shape of a cuboid.



The density of silver is  $10.5 \text{ g/cm}^3$

Work out the mass, in grams, of the block of silver.



..... grams

(Total for Question 29 is 3 marks)

30 Solve  $3(n - 1) < 21$



.....

(Total for Question 30 is 2 marks)

TOTAL FOR PAPER IS 80 MARKS

