

Please check the examination details below before entering your candidate information

Candidate surname

Other names

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

Centre Number

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Candidate Number

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**Time** 1 hour 30 minutes

**Paper  
reference**

**1MA1/2F**

**Mathematics**  
**PAPER 2 (Calculator)**  
**Foundation Tier**

**You must have:** Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser, calculator, Formulae Sheet (enclosed). 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 be used.**
- If your calculator does not have a  $\pi$  button, take the value of  $\pi$  to be 3.142 unless the question instructs otherwise.



## 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.
- Try to answer every question.
- Check your answers if you have time at the end.
- Good luck with your examination.

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 1476 to the nearest 10

.....

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

2 Write a fraction in the box to make the calculation correct.

$$1 - \frac{3}{10} =$$

.....

**(Total for Question 2 is 1 mark)**

3 Here is a list of numbers.

3    3    3    3    4    4    5    7    8

Write down the mode of the numbers.

.....

**(Total for Question 3 is 1 mark)**

4 Write down a 3 digit number that is a multiple of 5

.....

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

5 Write 0.4 as a percentage.

..... %

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

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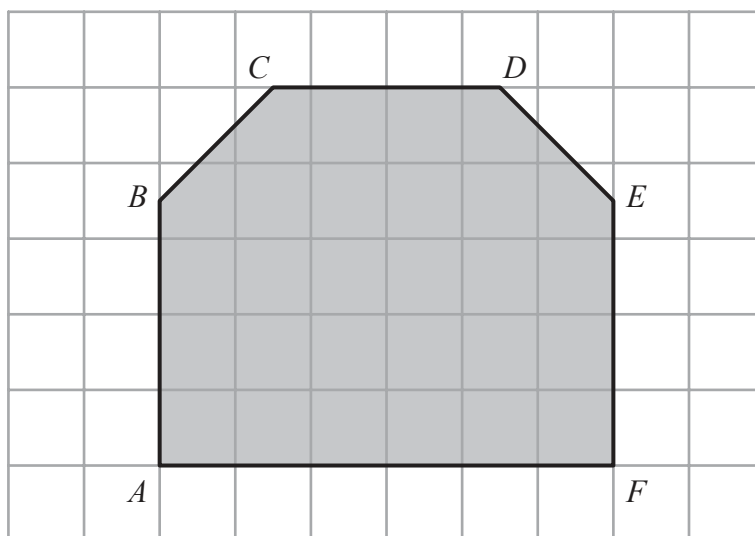


- 6 Write the following numbers in order of size.  
Start with the smallest number.

-11    -2    8    -7    3    10

.....  
(Total for Question 6 is 1 mark)

- 7 Here is polygon  $ABCDEF$  on a square grid.



- (a) Write down the mathematical name of the polygon.

.....  
(1)

- (b) Which side of the polygon is parallel to the side  $CD$ ?

.....  
(1)

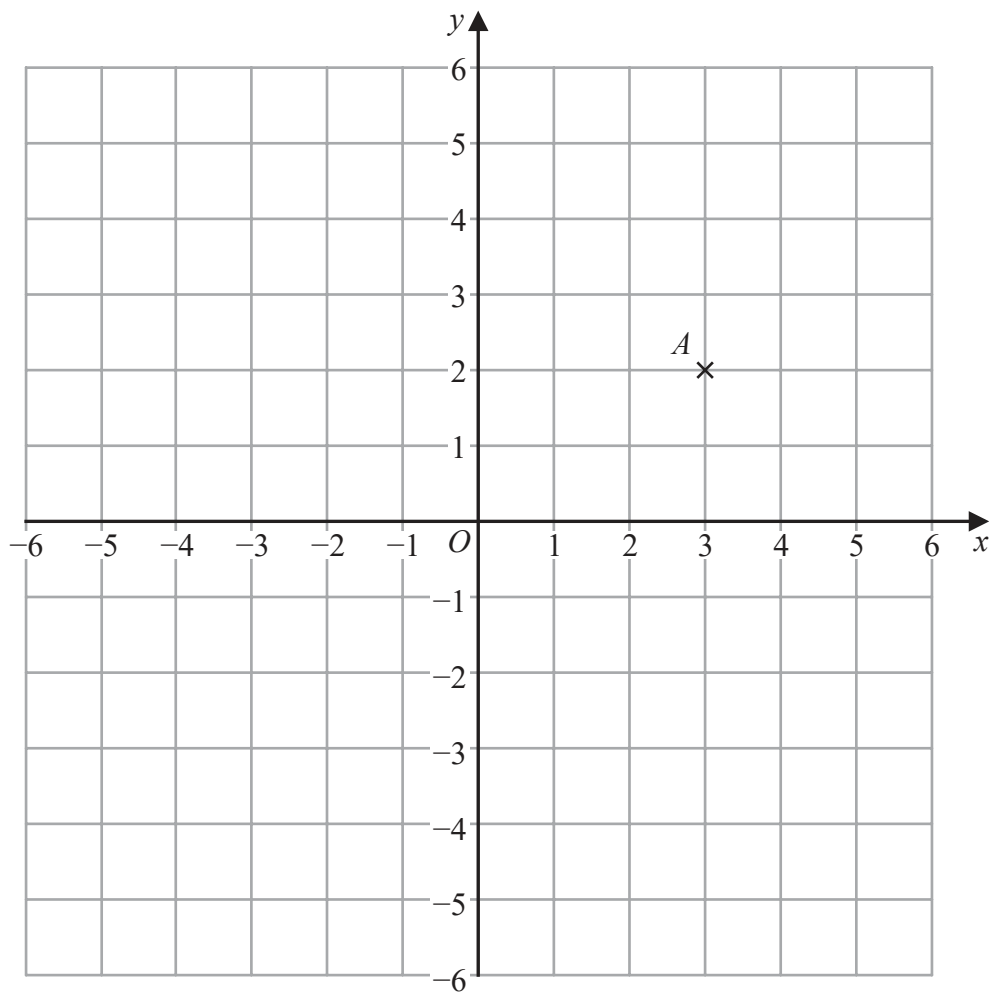
- (c) Write down a side of the polygon that is perpendicular to the side  $AF$ .

.....  
(1)

(Total for Question 7 is 3 marks)



8 Here is a centimetre grid.



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

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

(b) On the grid, mark with a cross ( $\times$ ) the point with coordinates  $(-4, 3)$   
Label this point  $B$ .

(1)

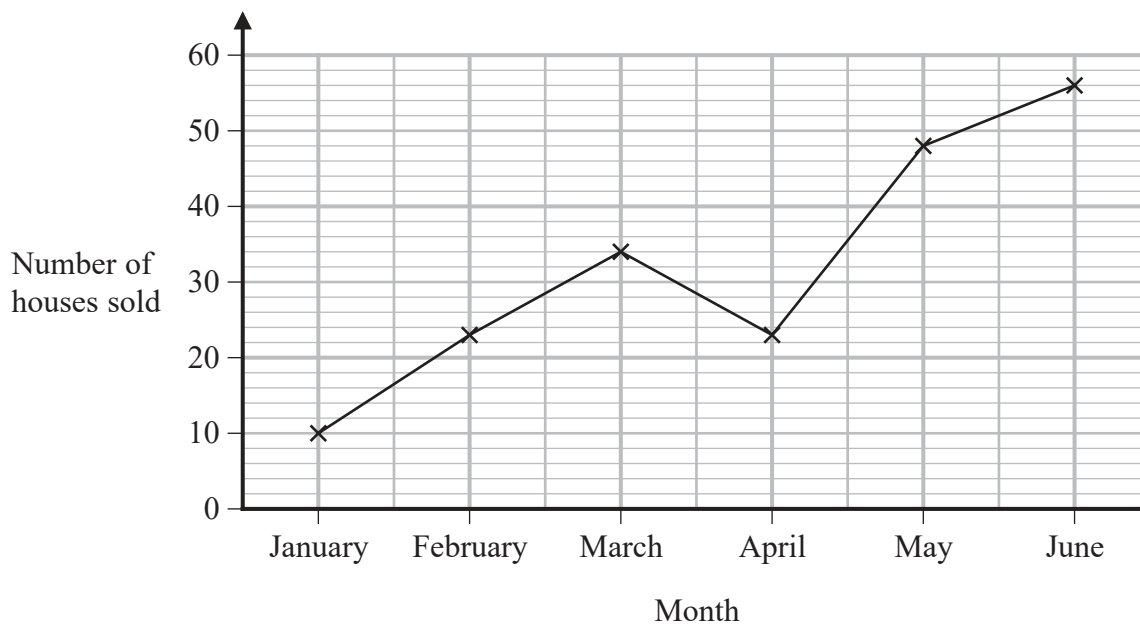
(c) On the grid, draw the circle with  
centre  $(1, -1)$   
and radius 4 cm.

(2)

(Total for Question 8 is 4 marks)



- 9 The graph shows information about the number of houses sold by an estate agent in each of six months last year.



- (a) How many houses were sold by the estate agent in February?

.....  
(1)

- (b) For this estate agent, write down the ratio of the number of houses sold in January to the number of houses sold in June.

.....  
(2)

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



**10** Sonia wants to book a holiday.  
The holiday will cost £1428

Sonia will pay a deposit of £150  
She will then pay the rest of the cost in 6 equal monthly payments.

How much is each monthly payment?

£.....

**(Total for Question 10 is 3 marks)**

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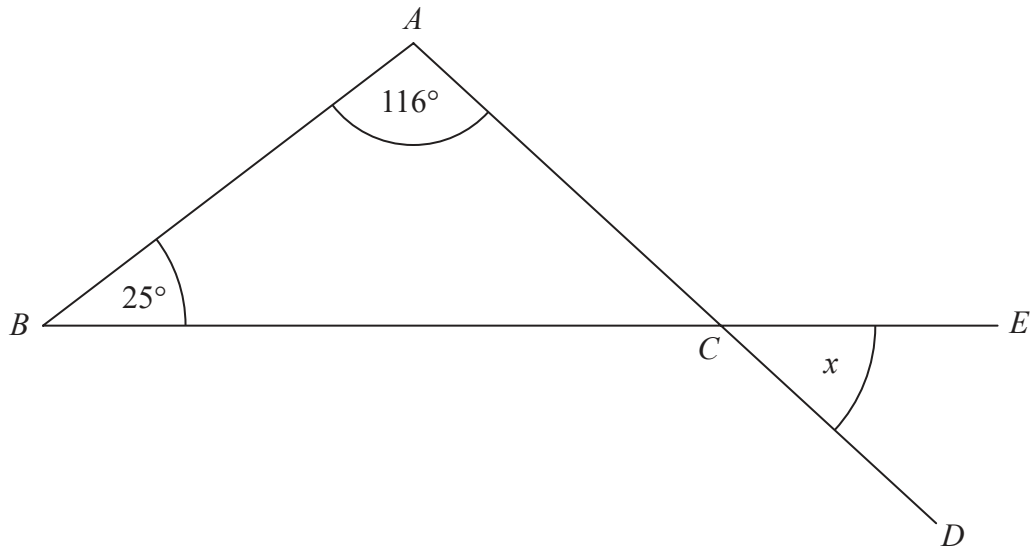


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11 The diagram shows a triangle  $ABC$ .



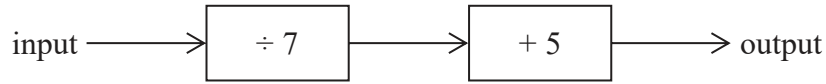
$ACD$  and  $BCE$  are straight lines.

Work out the size of the angle marked  $x$ .  
Give a reason for each stage of your working.

(Total for Question 11 is 3 marks)



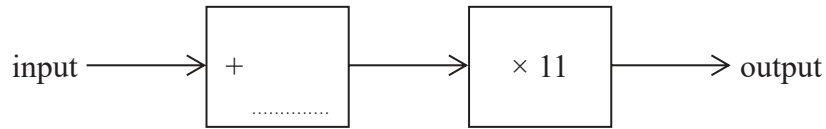
12 Here is a number machine.



(a) Work out the output when the input is 28

.....  
(1)

Here is a different number machine.  
The number machine is not complete.



When the input is 8, the output is 154

(b) Complete the number machine.

(2)

(Total for Question 12 is 3 marks)

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- 13 Sophie works in a bed shop.  
During the last three months she sold 198 beds.

59 beds were sold without a mattress.  
45 beds were double beds.  
17 of the single beds were sold without a mattress.  
67 of the 83 king size beds were sold with a mattress.

Use this information to complete the two-way table.

	Single	Double	King size	Total
With mattress				
Without mattress				
Total				

(Total for Question 13 is 3 marks)

- 14 The box below contains three mathematical symbols.

$=$ $<$ $>$
-------------

From the box, choose a symbol to make each of the following statements correct.

(i)  $\frac{5}{8}$  .....  $\frac{2}{8}$  (1)

(ii)  $-2 \times -3$  .....  $-3 + 9$  (1)

(Total for Question 14 is 2 marks)



- 15 The table shows information about the number of social media accounts used by each of 300 students.

Number of social media accounts	Frequency
0	3
1	57
2	84
3	75
4	81

- (a) Work out the total number of social media accounts used by these students.

.....  
(2)

- (b) Find the median number of social media accounts used by these students.

.....  
(2)

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

- 16 On a scale drawing, a building has length 12.4 cm and width 9.4 cm.  
The real length of the building is 62 metres.

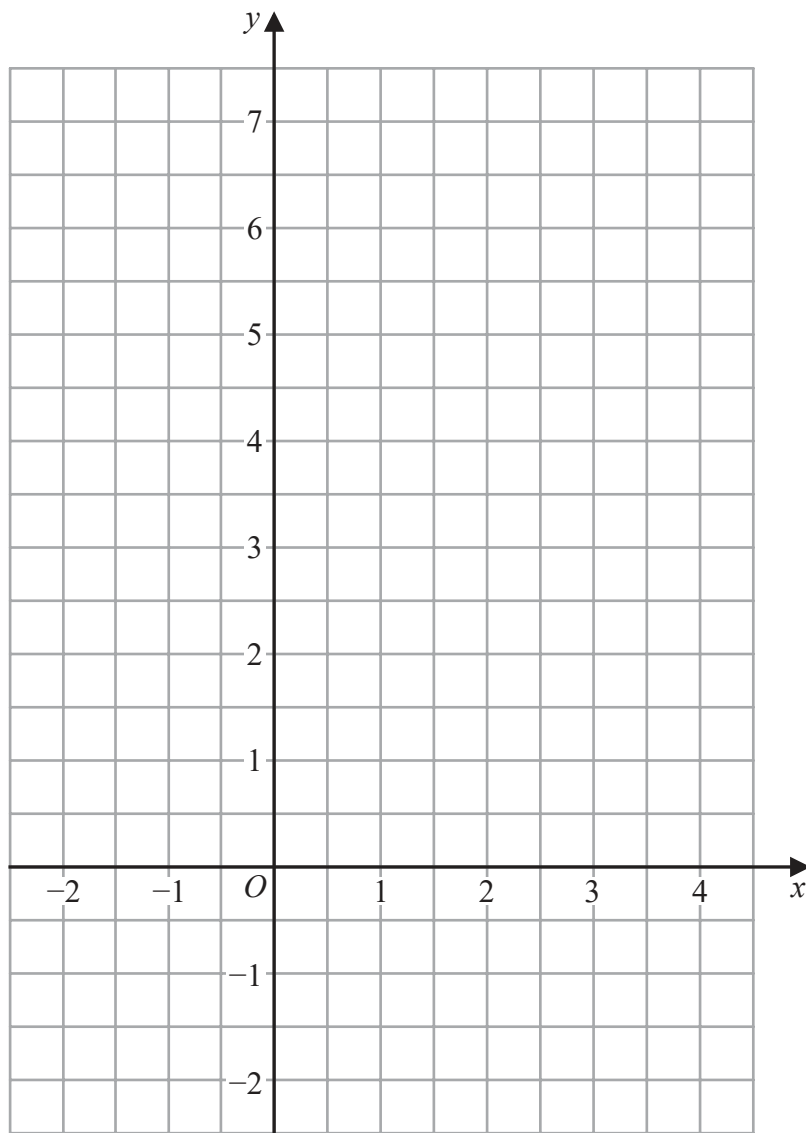
Work out, in metres, the real width of the building.

..... metres

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



17 On the grid below, draw the graph of  $y = 4 - x$  for values of  $x$  from  $-2$  to  $4$



(Total for Question 17 is 3 marks)

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18 This sign was in a doctor's waiting room.

115 appointments were missed last month.  
These missed appointments were a total of 25.3 hours.

Work out the mean length of time for each missed appointment.  
Give your answer in minutes.

..... minutes

**(Total for Question 18 is 3 marks)**

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19 Nimra buys a 3 kg box of sweets for £17.60

She puts the sweets into bags to sell.  
Each bag contains 150 g of sweets.

Nimra fills as many bags as possible.  
She will sell each bag for the same price.

Nimra wants to make a profit of at least 35%

Assuming she sells all the bags,  
what is the lowest price Nimra should charge for each bag?

£.....

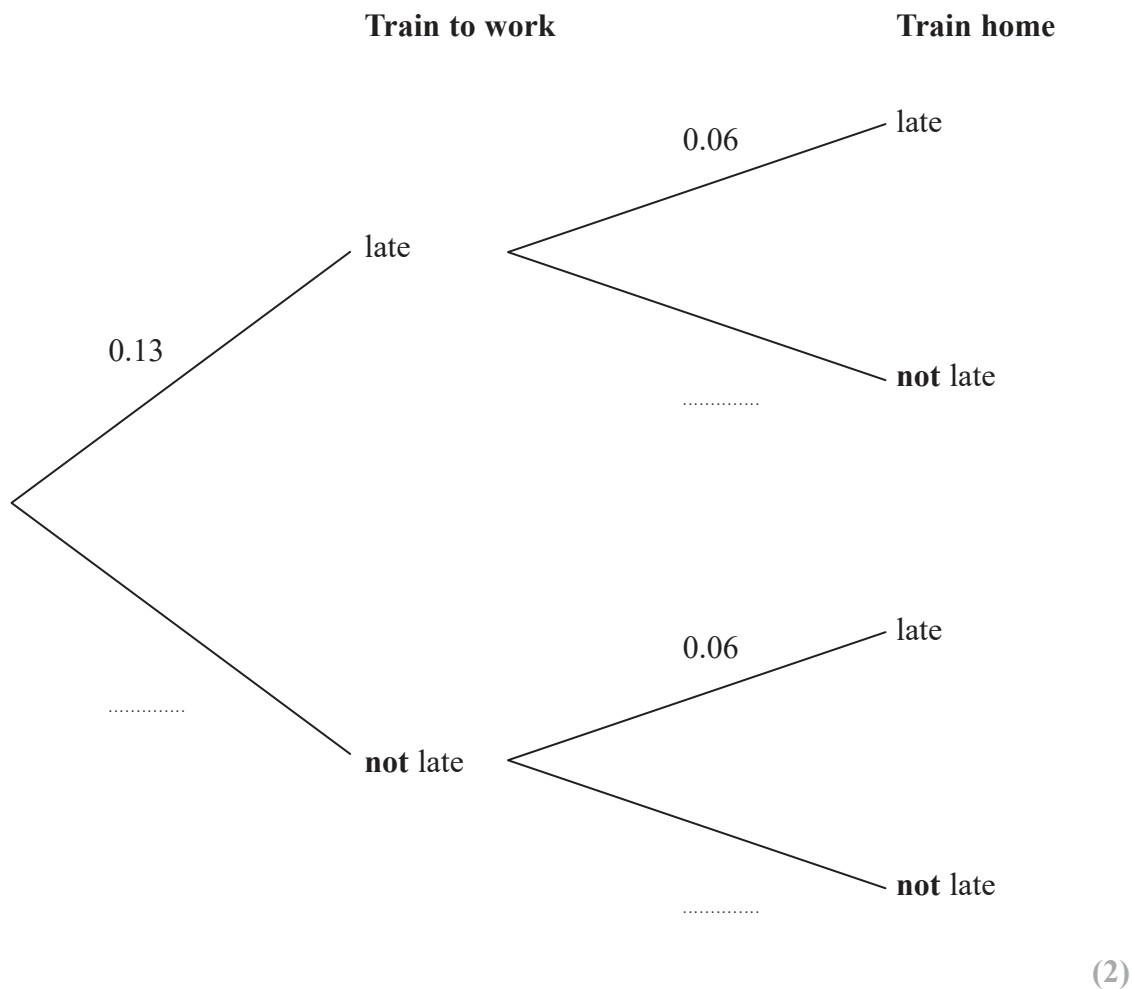
(Total for Question 19 is 5 marks)



20 Lorena gets a train at the same time each morning to go to work.  
She gets a train at the same time each evening to come home.

The probability tree diagram shows the probabilities of each train arriving late.

(a) Complete the probability tree diagram.



For a day that Lorena goes to work,

(b) work out the probability that the train to work and the train home will both arrive late.

(2)

(Total for Question 20 is 4 marks)



21 (a) Simplify  $(x^3)^5$

.....  
(1)

(b) Expand and simplify  $4(x + 3) + 7(4 - 2x)$

.....  
(2)

(c) Factorise fully  $15x^3 + 3x^2y$

.....  
(2)

**(Total for Question 21 is 5 marks)**

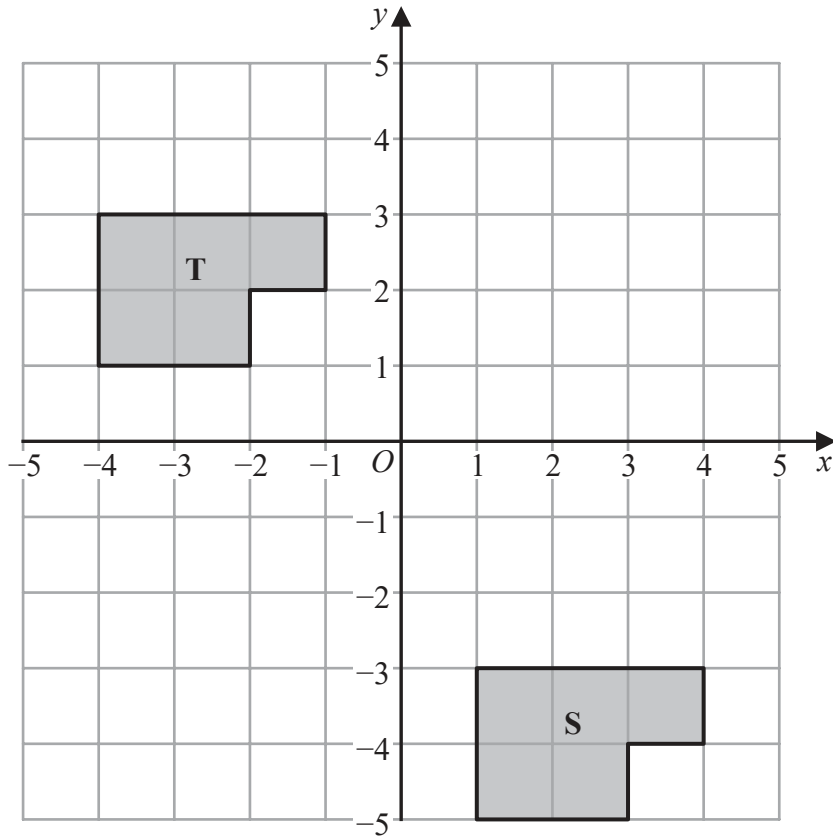
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Describe fully the single transformation that maps shape S onto shape T.

.....

.....

.....

(Total for Question 22 is 2 marks)

23 The length of a football pitch is 90 metres, correct to the nearest metre.

Complete the error interval for the length of the football pitch.

..... m  $\leq$  length < ..... m

(Total for Question 23 is 2 marks)

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24 Festival A will be in a rectangular field with an area of  $80\,000\text{ m}^2$   
The greatest number of people allowed to attend Festival A is 425

Festival B will be in a rectangular field 700 m by 2000 m.  
The greatest number of people allowed to attend Festival B is 6750

The area per person allowed for Festival B is greater than the area per person allowed for Festival A.

- (a) How much greater?  
Give your answer correct to the nearest whole number.

.....  $\text{m}^2$   
(4)

Callum says,

“ $300\text{ cm}^2$  is the same as  $3\text{ m}^2$  because there are 100 cm in 1 m so you divide by 100”

Callum’s method is wrong.

- (b) Explain why.

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

(Total for Question 24 is 5 marks)



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25 The points  $L$ ,  $M$  and  $N$  are such that  $LMN$  is a straight line.

The coordinates of  $L$  are  $(-3, 1)$

The coordinates of  $M$  are  $(4, 9)$

Given that  $LM : MN = 2 : 3$ ,

find the coordinates of  $N$ .

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

(Total for Question 25 is 4 marks)

26 A new phone cost £679

The value of the phone decreases at a rate of 4% per year.

Work out the value of the phone at the end of 3 years.

£.....

(Total for Question 26 is 3 marks)



- 27 In Spain, Sam pays 27 euros for 18 litres of petrol.  
In Wales, Leo pays £40.80 for 8 gallons of the same type of petrol.

$$1 \text{ euro} = \text{£}0.85$$
$$4.5 \text{ litres} = 1 \text{ gallon}$$

Sam thinks that petrol is cheaper in Spain than in Wales.

Is Sam correct?

You must show how you get your answer.

(Total for Question 27 is 4 marks)



28 Solve the simultaneous equations

$$5x + 2y = 27$$

$$6x + 4y = 28$$

$x =$  .....

$y =$  .....

(Total for Question 28 is 3 marks)

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**TOTAL FOR PAPER IS 80 MARKS**

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