

Centre No.						Paper Reference						Surname	Initial(s)	
Candidate No.						5	5	2	1	/	0	1	Signature	

Paper Reference(s)

5521/01

Edexcel GCSE

Mathematics A – 1387

Paper 1 (Non-Calculator)

Foundation Tier

Monday 4 June 2007 – Afternoon

Time: 1 hour 30 minutes

Examiner's use only

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Team Leader's use only

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Materials required for examination

Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.
Tracing paper may be used.

Items included with question papers

Nil

Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initials and signature.
Check that you have the correct question paper.
Answer ALL the questions. Write your answers in the spaces provided in this question paper.
You must NOT write on the formulae page. Anything you write on the formulae page will gain NO credit.
If you need more space to complete your answer to any question, use additional answer sheets.

Information for Candidates

The marks for individual questions and the parts of questions are shown in round brackets: e.g. (2).
There are 29 questions in this question paper. The total mark for this paper is 100.
There are 28 pages in this question paper. Any blank pages are indicated.
Calculators must not be used.

Advice to Candidates

Show all stages in any calculations.
Work steadily through the paper. Do not spend too long on one question.
If you cannot answer a question, leave it and attempt the next one.
Return at the end to those you have left out.

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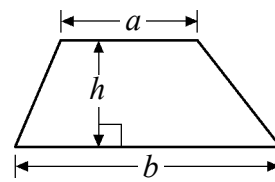
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GCSE Mathematics 1387/8

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





Answer ALL TWENTY NINE questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

You must NOT use a calculator.

1. Heather carried out a survey about her friends' pets.

Here are her results.

CatCatDogHamsterCat

DogHamsterCatCatDog

HamsterDogHamsterDogFish

CatDogFishCatCat

Complete the table to show Heather's results.

Pet	Tally	Frequency
Cat		
Dog		
Fish		
Hamster		

Q1

(Total 3 marks)

2. Write these numbers in order of size.

Start with the smallest number.

35672711842

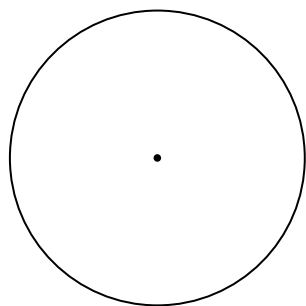
.....

(Total 1 mark)

Q2

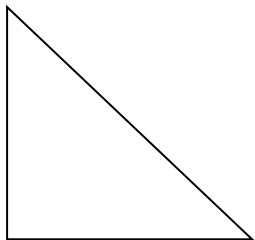


3. (a) In the circle, draw a diameter.



(1)

(b) In the triangle, mark the right angle with a letter *R*.



(1)

(c) In the space below, draw a rectangle.










(1)


(Total 3 marks)

Q3





4. The pictogram shows the numbers of loaves of bread made by Miss Smith, Mr Jones and Mrs Gray.		Leave blank
Miss Smith	   	
Mr Jones	 	
Mrs Gray	  	
Ms Shah		
Mr Khan		

 represents 20 loaves of bread

(a) Write down the number of loaves of bread made by Mr Jones.

.....
(1)

(b) Write down the number of loaves of bread made by Mrs Gray.

.....
(1)

Ms Shah made 60 loaves of bread.
Mr Khan made 90 loaves of bread.

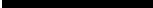
(c) Use this information to complete the pictogram.

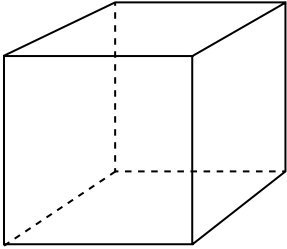
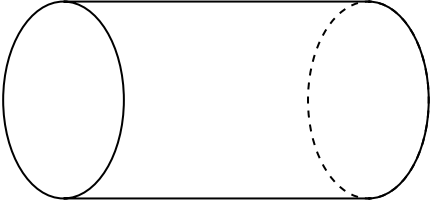
(2)

(Total 4 marks)

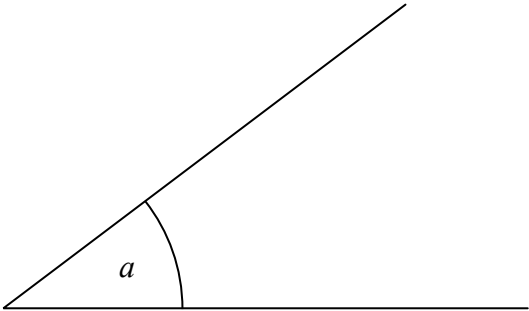


N 2 5 7 6 2 A 0 5 2 8



5. (a) Write the number seven thousand, two hundred and fifty two in figures.		Leave blank
 (1)	
(b) Write the number 3086 in words. (1)	
(c) Write the number 4637 to the nearest hundred. (1)	
(d) Write the value of 2 in the number 5271 (1)	Q5 <div></div>
(Total 4 marks)		
6. Write down the mathematical name of each of these 3-D shapes.		Q6 <div></div>
(i)	(ii)	
		
(i)	(ii)	(Total 2 marks)



<p>7. Work out an estimate for the value of 5.1×98</p>	Leave blank
<p>..... (Total 2 marks)</p>	Q7 <input type="text"/>
<p>8. (a) Measure the length of PQ. State the units with your answer.</p> <p>P-----Q</p> <p>..... (2)</p> <p>(b) Measure the size of angle a.</p> <p></p> <p>..... (1)</p> <p>(Total 3 marks)</p>	Q8 <input type="text"/>



Leave
blank

9. The table shows the percentage of each of the materials used in making a car tyre.

Material	Percentage
Natural rubber	12%
Synthetic polymers	25%
Carbon black	26%
Oil	17%
Fabric	4%
Wire	10%
Other	6%

(a) Write down the name of the material with the largest percentage.

.....
(1)

(b) Write 10% as a decimal.

.....
(1)

(c) Write 4% as a decimal.

.....
(1)

(d) Write 26% as a fraction.
Give your answer in its simplest form.

.....
(2)

(Total 5 marks)

Q9





10. The table shows the distances, in miles, between 4 cities.

London

74	Portsmouth		
39	58	Reading	
97	41	57	Salisbury

(a) Write down the distance between London and Salisbury.

..... miles

(1)

(b) Which two cities are the shortest distance apart?

..... and

(1)

Nazim drives from Portsmouth to Salisbury.

He then drives from Salisbury to Reading.

Finally he drives from Reading to Portsmouth.

(c) Work out the total distance Nazim drives.

..... miles

(3)

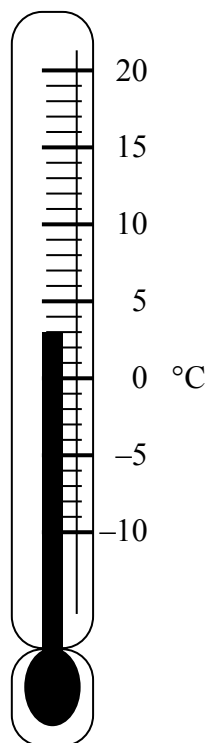
(Total 5 marks)

Leave blank

Q10



11.



(a) Write down the temperature shown on the thermometer.

..... °C
(1)

The temperature falls by 8°C.

(b) Work out the new temperature.

..... °C
(1)

(Total 2 marks)

Leave
blank

Q11



12. (a) Complete this table.
Write a sensible unit for each measurement.
Three have been done for you.

	Metric	Imperial
The length of your finger	inches
The distance between America and England	kilometres
The amount of petrol in a petrol tank	gallons

(3)

(b) Change 3 metres to centimetres.

..... cm

(1)

(c) Shalim says 1.5 km is less than 1400 m.
Is he right?
Explain your answer.

.....

.....

(1)

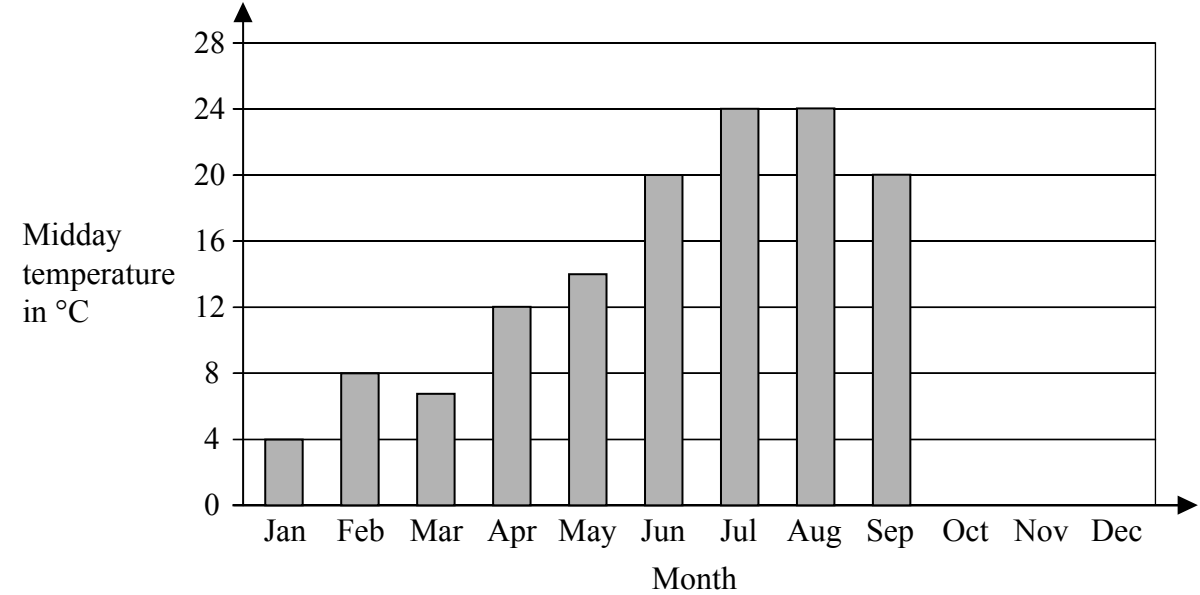
(Total 5 marks)

Q12



Leave
blank

13. The bar chart shows some information about the midday temperature in Halifax on the first day of some months last year.



Here are the midday temperatures on the first day of October, November and December.

October 12°C
November 8°C
December 6°C

- (a) Complete the bar chart to show this information. (2)
- (b) Which two bars show the highest temperatures?
..... and (1)
- (c) Work out the range of the temperatures shown on the bar chart.
..... °C (1)
- (d) Describe what happened to the temperatures on the bar chart between March and July.
..... (1)

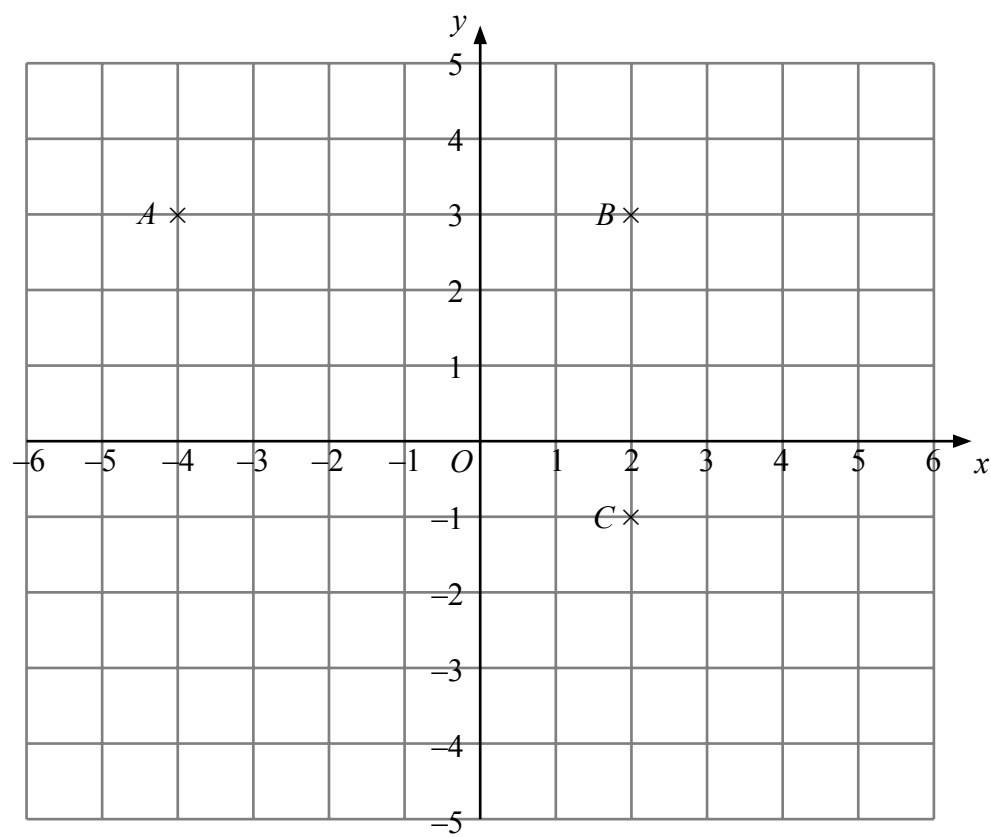
(Total 5 marks)

Q13



Leave
blank

14.



(a) Write down the coordinates of the point

(i) A ,

(..... ,)

(ii) C .

(..... ,)

(2)

(b) (i) On the grid, mark the point D so that $ABCD$ is a rectangle.

(ii) Write down the coordinates of D .

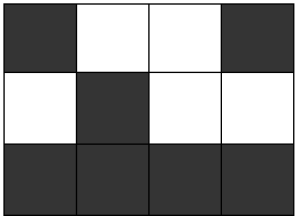
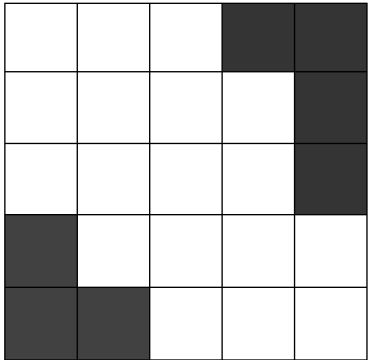
(..... ,)

(2)

(Total 4 marks)

Q14



<p>15. (a)</p>  <p>Shade one more square to make a pattern with 1 line of symmetry.</p> <p>(1)</p> <p>(b)</p>  <p>Shade one more square to make a pattern with rotational symmetry of order 2</p> <p>(1)</p> <p>(Total 2 marks)</p>	<p>Leave blank</p> <p>Q15</p>
<p>16. Beth says $20 - 5 \times 3$ is 45</p> <p>Pat says $20 - 5 \times 3$ is 5</p> <p>(a) Who is right? Give a reason for your answer.</p> <p>..... is right</p> <p>(1)</p> <p>(b) Work out $(12 + 9) \div 3$</p> <p>.....</p> <p>(1)</p> <p>(Total 2 marks)</p>	<p>Q16</p>





<p>17. (i) On the probability scale, mark with a letter S the probability that the sun will rise tomorrow.</p> <div data-bbox="611 685 1419 795"></div> <p>(ii) On the probability scale, mark with a letter P the probability that when you roll a fair 6-sided dice you will score a 7</p> <div data-bbox="611 1032 1419 1142"></div> <p>(iii) On the probability scale, mark with a letter Q the probability that when you roll a fair 6-sided dice you will get a number less than 3</p> <div data-bbox="611 1380 1419 1489"></div>	<p>Leave blank</p> <p>Q17</p> <div data-bbox="1614 1599 1656 1673"><input type="text"/></div> <p>(Total 3 marks)</p>



N 2 5 7 6 2 A 0 1 5 2 8



<p>18. A full glass of water holds $\frac{1}{6}$ of a bottle of water.</p> <p>How many glasses of water can be filled from $2\frac{1}{2}$ bottles of water?</p>	Leave blank																																								
<p>.....</p> <p>(Total 3 marks)</p>	Q18 <input type="text"/>																																								
<p>19. Here are two fractions $\frac{3}{4}$ and $\frac{4}{5}$</p> <p>Which is the larger fraction?</p> <p>You must show your working to explain your answer.</p> <p>You may use the grids to help with your explanation.</p> <div><table><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr></table><table><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr></table></div>																																									
<p>..... is the larger fraction</p> <p>(Total 3 marks)</p>	Q19 <input type="text"/>																																								

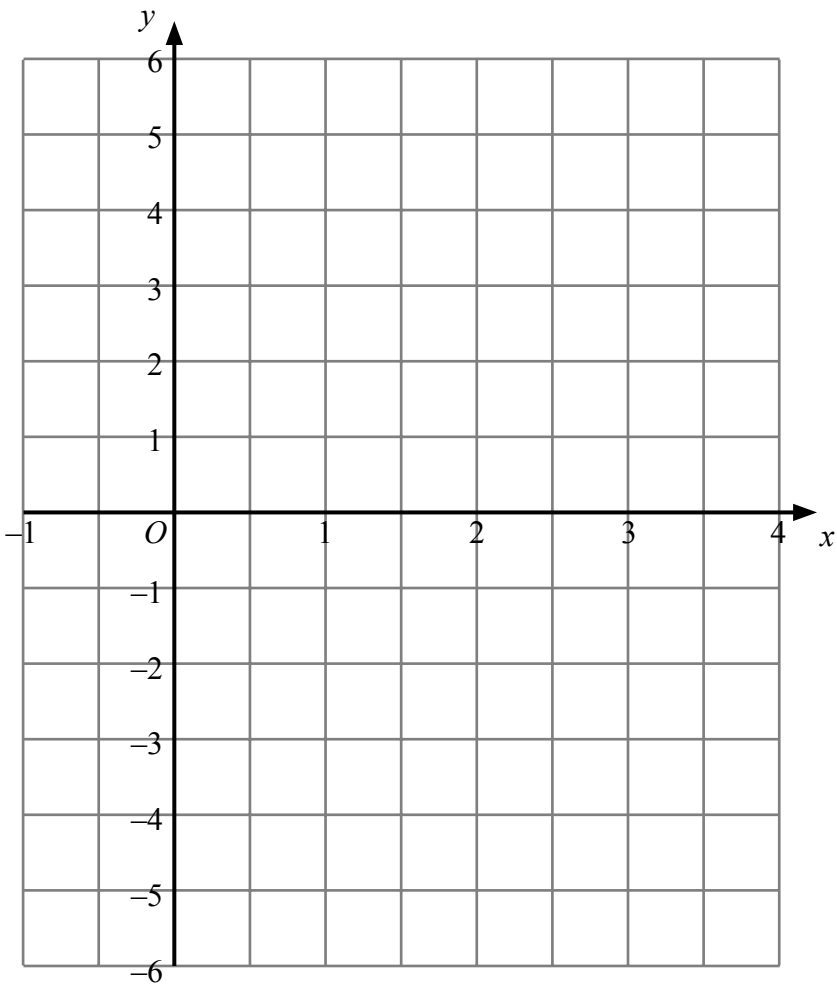


20. (a) Complete the table of values for $y = 2x - 3$

x	-1	0	1	2	3	4
y		-3	-1			

(2)

(b) On the grid, draw the graph of $y = 2x - 3$



(2)

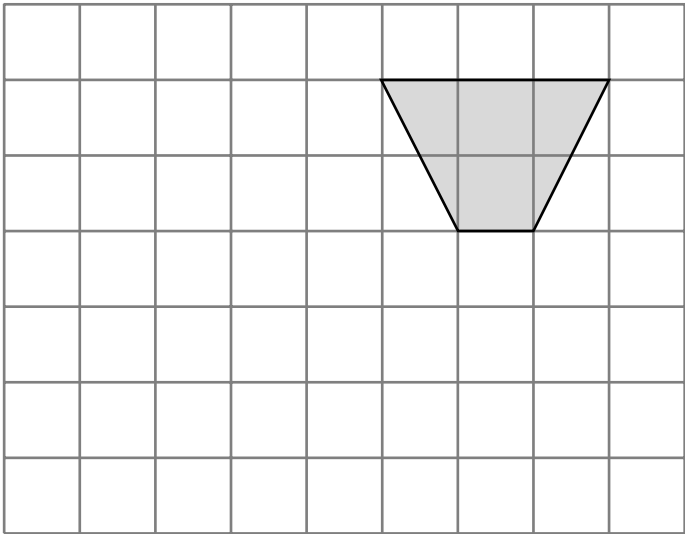
Q20

(Total 4 marks)



N 2 5 7 6 2 A 0 1 7 2 8

21. On the grid, show how this shape tessellates.
You should draw at least 6 shapes.



(Total 2 marks)

Leave blank

Q21

22. Emily has a bag of 20 fruit flavour sweets.
7 of the sweets are strawberry flavour,
11 are lime flavour,
2 are lemon flavour.

Emily takes at random a sweet from the bag.

Write down the probability that Emily

(a) takes a strawberry flavour sweet,

.....
(1)

(b) does **not** take a lime flavour sweet,

.....
(1)

(c) takes an orange flavour sweet.

.....
(1)

(Total 3 marks)

Q22





<p>23. (a) Simplify $a + a + a + a$</p> <p>.....</p> <p>(1)</p> <p>(b) Simplify $3 \times b \times 4$</p> <p>.....</p> <p>(1)</p> <p>(c) Simplify completely $4a + 5b - 2a + b$</p> <p>.....</p> <p>(2)</p> <p>(d) Factorise $x^2 - 6x$</p> <p>.....</p> <p>(2)</p> <p>(Total 6 marks)</p>	<p>Leave blank</p> <p>Q23</p> <div></div>
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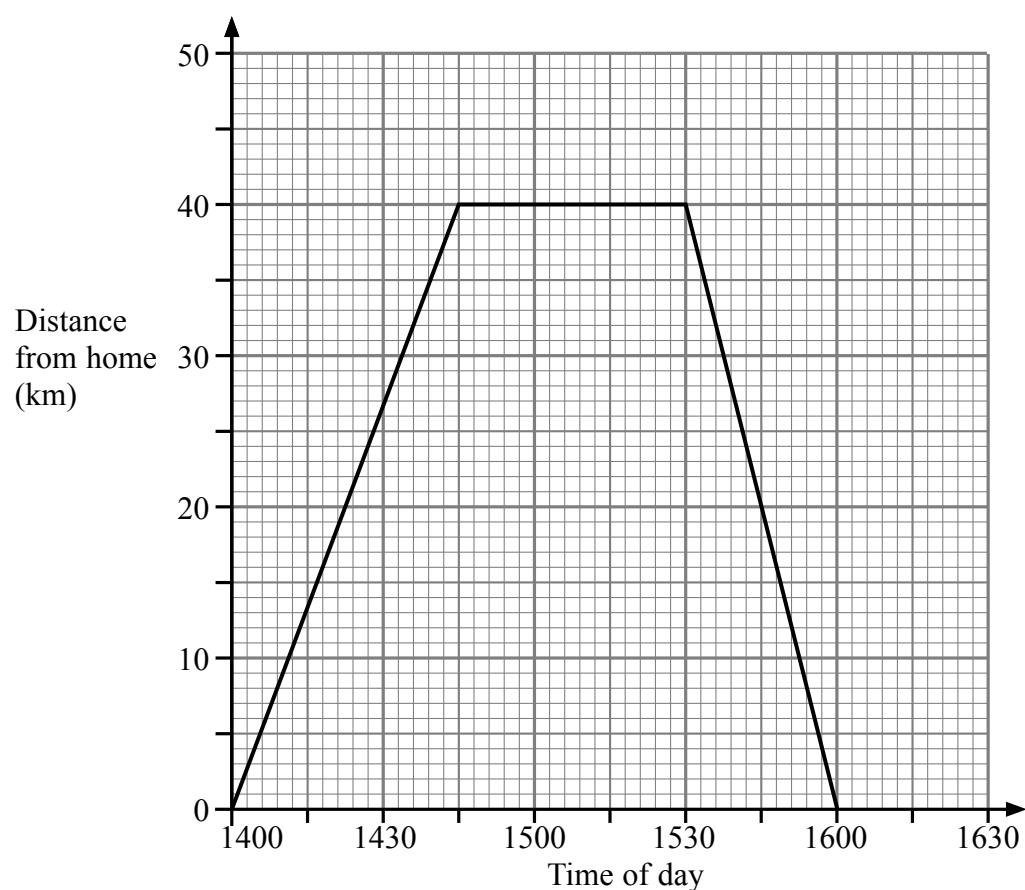


N 2 5 7 6 2 A 0 1 9 2 8



Leave
blank

24. Judy drove from her home to the airport.
She waited at the airport.
Then she drove home.
Here is the distance-time graph for Judy's complete journey.



- (a) What is the distance from Judy's home to the airport?

..... km
(1)

- (b) For how many minutes did Judy wait at the airport?

..... minutes
(1)

- (c) Work out Judy's average speed on her journey home from the airport.
Give your answer in kilometres per hour.

..... kilometres per hour
(2)

Q24

(Total 4 marks)





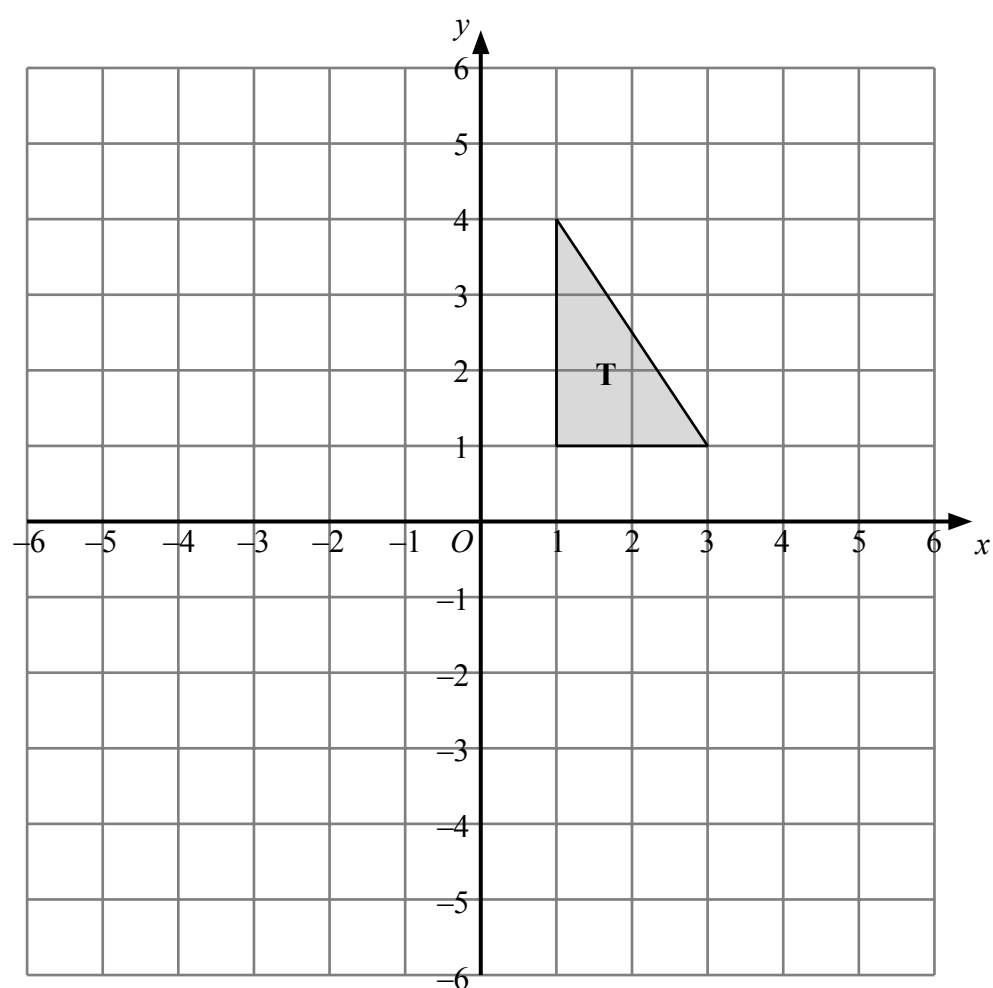
<p>25. Using the information that</p> $19 \times 24 = 456$ <p>write down the value of</p> <p>(a) 19×240</p> <p>..... (1)</p> <p>(b) 19×2.4</p> <p>..... (1)</p> <p>(c) $456 \div 190$</p> <p>..... (1)</p> <p>(Total 3 marks)</p>	<p>Leave blank</p> <p>Q25</p> <div></div>
<p>26. Work out the value of $\frac{p(q-3)}{4}$ when $p = 2$ and $q = -7$</p> <p>..... (Total 3 marks)</p>	<p>Q26</p> <div></div>



N 2 5 7 6 2 A 0 2 1 2 8



27.



Triangle **T** has been drawn on the grid.

- (a) Reflect triangle **T** in the y -axis.
Label the new triangle **A**.

(1)

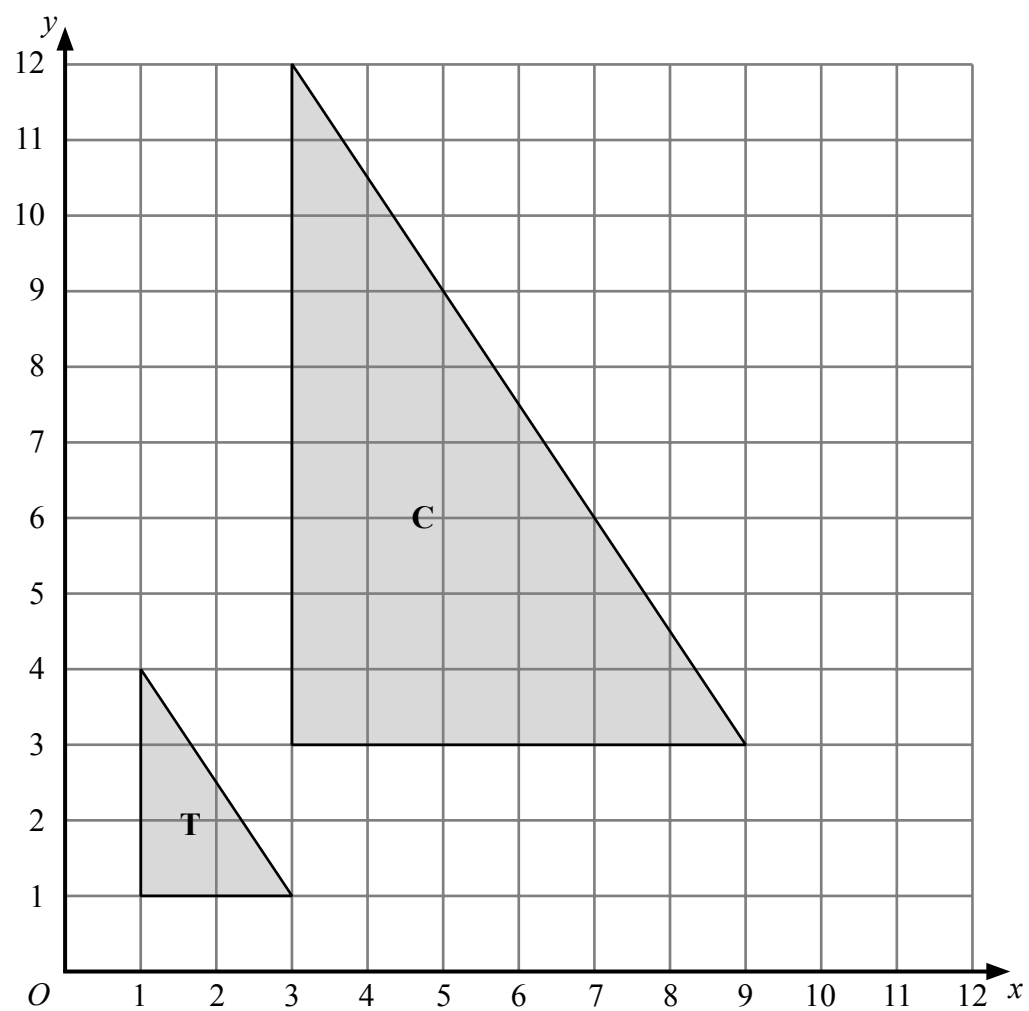
- (b) Rotate triangle **T** by a half turn, centre O .
Label the new triangle **B**.

(2)

Leave
blank



Leave
blank



(c) Describe fully the single transformation which maps triangle **T** onto triangle **C**.

.....
.....

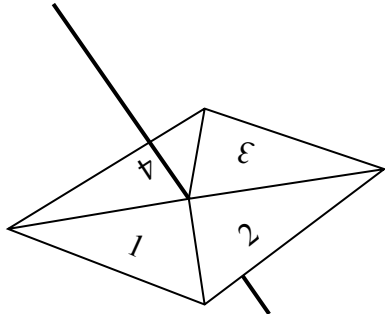
(3)

Q27

(Total 6 marks)



28. Here is a 4-sided spinner.



The sides of the spinner are labelled 1, 2, 3 and 4.
Hanif spins the spinner 100 times.

His results are shown in the table.

Score	Frequency
1	26
2	26
3	23
4	25

(a) Is the spinner fair?
Give a reason for your answer.

.....
.....

(1)

(b) Work out the mean score.

.....

(3)

(Total 4 marks)

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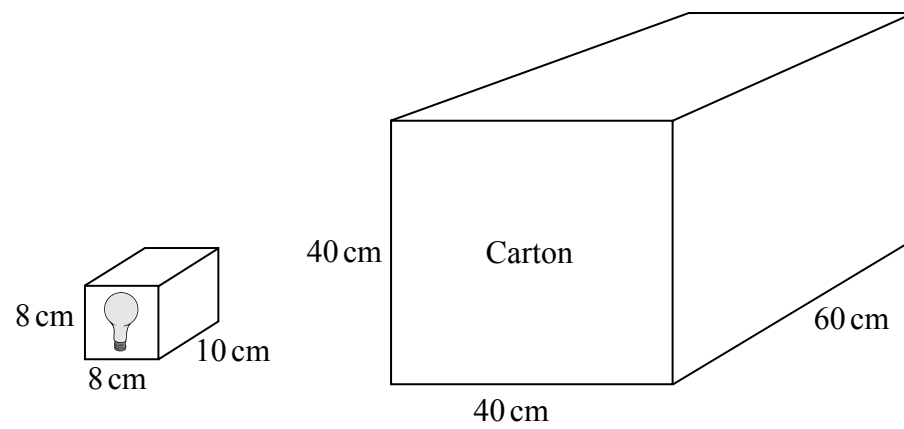
Q28



29.

Leave
blank

Diagrams **NOT**
accurately drawn



A light bulb box measures 8 cm by 8 cm by 10 cm.
Light bulb boxes are packed into cartons.
A carton measures 40 cm by 40 cm by 60 cm.

Work out the number of light bulb boxes which can completely fill **one** carton.

Q29

.....
(Total 4 marks)

TOTAL FOR PAPER: 100 MARKS

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