

General Certificate of Secondary Education January 2014

	_		_	
Ma	the	ma	tia	2

Unit T5 Paper 2

(With calculator)

**Foundation Tier** 





[GMT52]

\*GMT52\*

WEDNESDAY 15 JANUARY 10.45am-11.45am

TIME

1 hour.

## INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page. You must answer the questions in the spaces provided. Do not write outside the box, around each page, on blank pages or tracing paper.

Complete in blue or black ink only. Do not write with a gel pen.

Answer all thirteen questions.

Any working should be clearly shown in the spaces provided since marks may be awarded for partially correct solutions.

You **may** use a calculator for this paper.

## INFORMATION FOR CANDIDATES

The total mark for this paper is 50.

Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.

Functional Elements will be assessed in this paper.

Quality of written communication will be assessed in questions 2 and 3.

You should have a calculator, ruler, compasses and a protractor.

The Formula Sheet is on page 2.

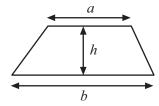


## Formula Sheet

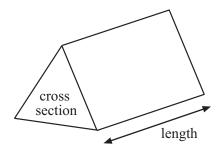
Paramony
Par

Reaction of the state of the st

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



**Volume of prism** = area of cross section  $\times$  length





(a) Write down the temperature shown on the thermometer. **Examiner Only** 32 ° C [1] **(b) (i)** Write down the weight shown by the arrow below. kg -15 Answer \_\_\_\_\_ kg [1] (ii) An extra 3.5 kg is added. Draw an arrow to show the **total** weight now on the scale. [2]

[Turn over

Total Question 1



_					
Qu	ality	of written communication will be assessed in this question.	Examin Marks	er Only Remark	
2	Jean Ros	n and Rose each have a bag of sweets. n has equal numbers of toffee, mint and fruit sweets. se has twice as many mint sweets as fruit sweets but she has no toffee eets.			
	The	ey each take one sweet at random from their own bag.			
	(a)	Who is more likely to take a mint sweet? <b>Explain your answer clearly.</b>			
		because			
		[2]			
	(b)	Who is more likely to take a fruit sweet? Explain your answer clearly.			
		because			
		[2]			
			Total Qu	estion 2	
					ı

Provedence 2 Leavening

Rewards 2 Learning Rewards

Paraming

Research

Research

Research

Research

Research

Research

De l'adming

Dearing

Control

Research

Do

Learning

Research

Research

Rowerds 2 Learning Rowerds

20 7 Learning

Reserved

Describer

J. Secretary

Reserved

Describer

J. Learning

Remercial
Particular Control of C

Powerful Control of Powerf

Parties of the second of the s

Reversing

Learning

Reversing

Loarning



Quality of written communication will be assessed	ed in this question.	Examin Marks	ner Only Remark
Jill has a part-time job in the petrol station. The pay is £7 per hour. She earns time and a half on Saturday and doubt Last week she worked 6 hours on Monday, 6 hours on Sunday. How much did she earn in total? Show your work clearly.		Marks	Remark
Answer	[5]		uestion 3

To carriery

To ca



4	Every car salesperson with NewAutos earns a basic monthly salary of £1800 In addition they earn a bonus of £75 for every car that they sell in the month.	Examiner Only  Marks Remark
	Total monthly salary = £1800 + Number of cars sold $\times$ Bonus per car sold	
	<ul><li>(a) Eileen is a car salesperson with NewAutos.</li><li>She sold 15 cars in April.</li><li>Work out her total monthly salary for April.</li></ul>	
	Answer £ [2]	
	(b) Jim is another car salesperson with NewAutos. In May his total monthly salary was £3525 Work out how many cars Jim sold in May.	
		Total Question 4
8695	Answer cars [2]	

Roserdo 2 Learning 7 Learning

De l'earning

Paraming J. Learning Paraming J. Learning

Roserdo
Roserdo
Roserdo
Roserdo
Roserdo
Reserdo

De l'adming

Parties of Research Partie

ROMERCO ROMERCO PLOAMING

Rewards

A Learning

Russenson

Powerful J. Learning

G.

Description of the second of t

20 7 Learning

Roaming

Powerds

Reserved

Reserved

Reserved

Reserved

Reserved

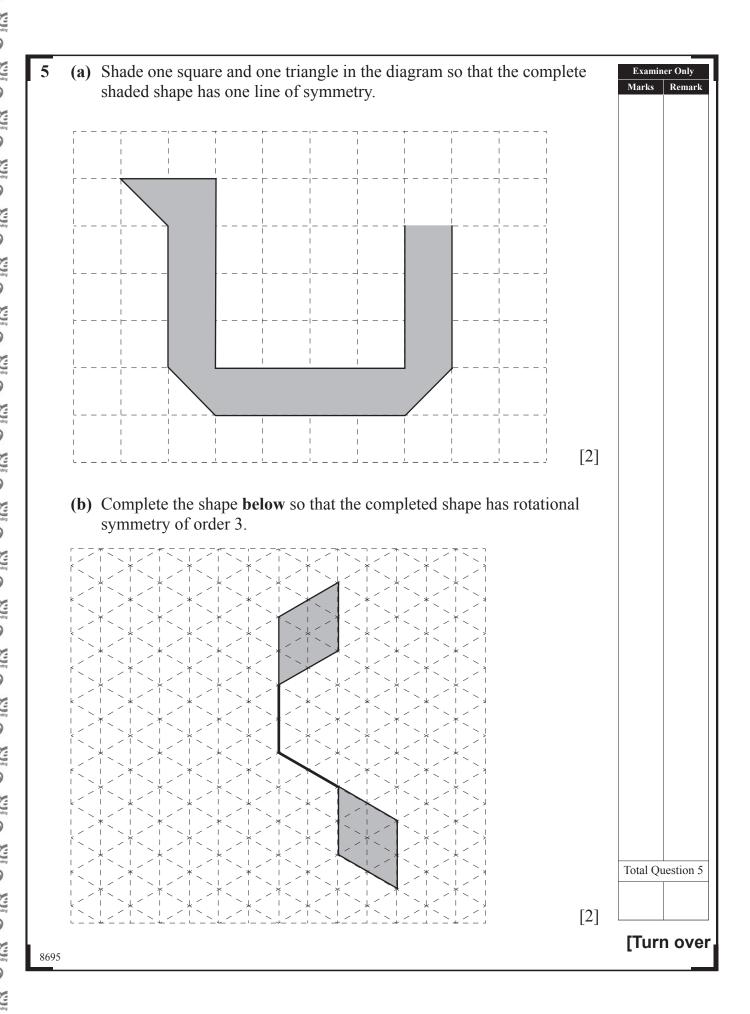
Learning Rowards

Do

Rewards

Rewards







6	Mary has 63 square tiles and she wants to arrange them all to make a rectangle.	Examino Marks	er Only Remark
	Write down the length and width of two <b>different</b> rectangles that she could make.		
	Answer 1st rectangle length, width [1]  2nd rectangle length, width [1]	Total Qu	estion 6
7	700 people arrive at a bus station and have to be transferred to a local airport.		
	The airport buses can carry a maximum of 48 passengers.		
	(a) How many buses are filled?		
	Answer buses [1]		
	<b>(b)</b> Calculate the number of people who have to travel in the last bus to ensure all 700 people reach the airport.		
	Answer people [1]		
		Total Qu	estion 7
8695			

Roward

De p Learning Roward

Parting Learning Research

Description of the state of the



8	Bradley was c Convert this sy			ed of 25 mph			Examii Marks	ner Only Remark
				Answer _		km/h [2]	Total Q	uestion 8
9	A box contain A packet of cr Some of the pr below.	isps is taken robabilities c	at random find taking each	om the box. h flavour are	shown in th	e table		
	Flavour	Cheese	Vinegar	Bacon	Sausage	Beef		
	Probability	0.3	0.12		0.25	0.05		
(a) Calculate the probability that the crisps are Bacon flavour.  Answer [2]  (b) Calculate the probability that the crisps are <b>not</b> Vinegar flavour.  Answer [1]					Total Q	uestion 9		
8695							[fur	n over

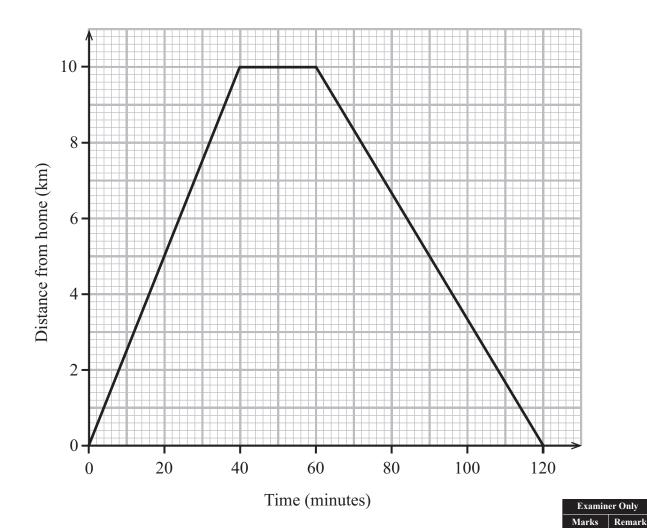
To Lamby

To Lam



10 Katie went on a cycling trip from her home.

The diagram below shows the distance/time graph for her complete journey.



(a) What is the meaning of the horizontal line on the graph?

**(b)** How far did she travel in the first 30 minutes?

Answer \_\_\_\_\_ km [1]

The Control of the Co



	(c)	How long did it take her to travel the first 4 kilometres?	Examiner Only  Marks Remark
		Answer minutes [1]	
	(d)	Where was Katie after 120 minutes?	
		Answer [1]	
	(e)	What was the average speed for the first 30 minutes?	
		Answer km/h [1]	
	<b>(f)</b>	At what stage of the trip was she travelling at the fastest average speed?	
		Answer [1]	
	(g)	After how many minutes had she travelled a distance of 14 kilometres?	
		Answer minutes [1]	
			Total Question 10
			[Turn over
8695			[Turn over

ng Learning

TO LANDY

TO LAN



This spinner is a regular octagon. **Examiner Only** Marks Remark 8 S 6 (a) The spinner is spun once. Below is a probability scale. 0 В Е F Н D G A From the scale write down the letter which represents (i) the probability of the spinner landing on the number 10 Answer \_\_\_\_\_ [1] (ii) the probability of the spinner landing on an even number Answer \_\_\_\_\_ [1] (iii) the probability of the spinner landing on the number 3 Answer \_\_\_\_\_ [1] (iv) the probability of the spinner landing on a multiple of 4

DE Learning

Daning Co

8695



Answer \_\_\_\_\_ [1]

<b>(b)</b> The spinner is spun 60 times. How many times would you expect i land on a number greater than 2?	t to	Examin Marks	Remark
Answer	_ [2]	Total Qu	estion 11
<b>12</b> Divide £292 in the ratio 1:3:4			
Answer,,,	_ [3]		
			estion 12
8695		[Turr	n over

Tamoring
Tam



13	A solid hexagonal prism of mass 8600 g has a cross-sectional area 60 cm <sup>2</sup> and length 23 cm.	of	Examin Marks	er Only Remark
	$60 \text{ cm}^2$ $23 \text{ cm}$			
	Calculate the density of the prism in g/cm <sup>3</sup> .			
	Give your answer to an appropriate degree of accuracy.			
	Answer	g/cm <sup>3</sup> [4]		
		8, **** [1]		
			Total Que	estion 13
8695				

Roward

Learning

Research

Research

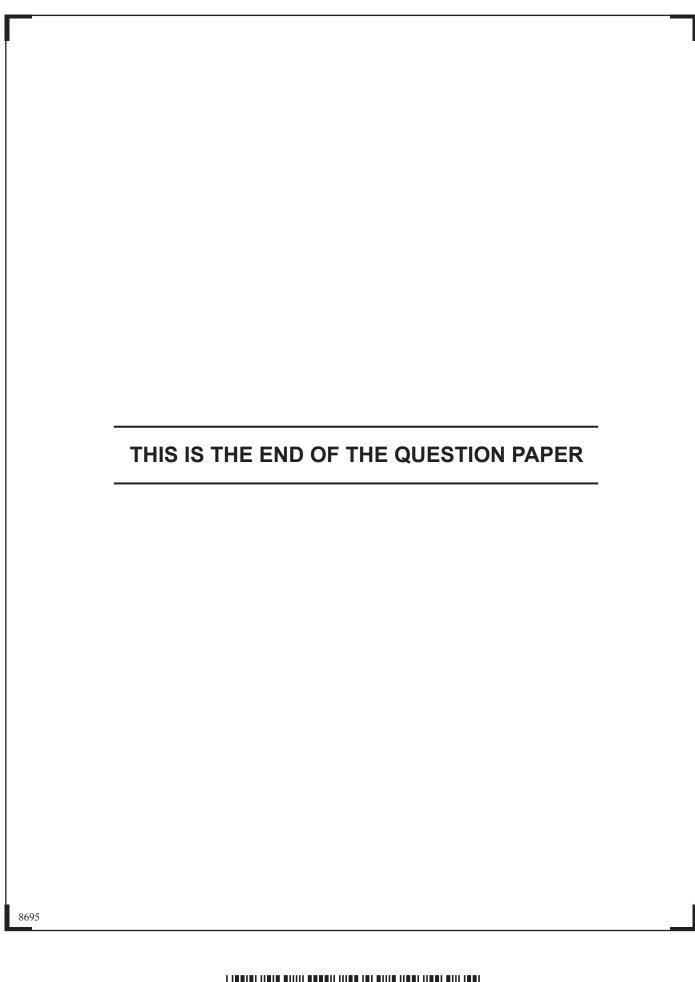
Research

Research

Desired Control of Con

Parameter Control of Research Control of Resea





Control Contro



## DO NOT WRITE ON THIS PAGE For Examiner's use only Question Marks Number 2 3 4 6 7 8 9 10 11 12 13 **Total** Marks **Examiner Number** Permission to reproduce all copyright material has been applied for. In some cases, efforts to contact copyright holders may have been unsuccessful and CCEA will be happy to rectify any omissions of acknowledgement in future if notified. 8695

Company
Compan