



Rewarding Learning

General Certificate of Secondary Education
January 2014

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Candidate Number

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Mathematics

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.**

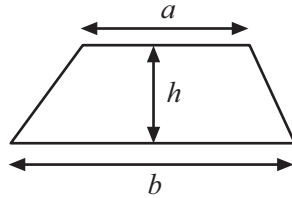
You should have a calculator, ruler, compasses and a protractor.

The Formula Sheet is on page 2.

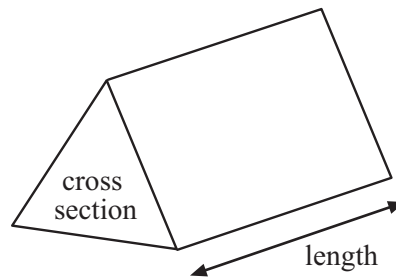


Formula Sheet

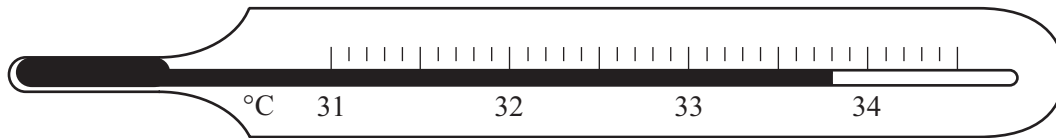
$$\text{Area of trapezium} = \frac{1}{2}(a + b)h$$



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

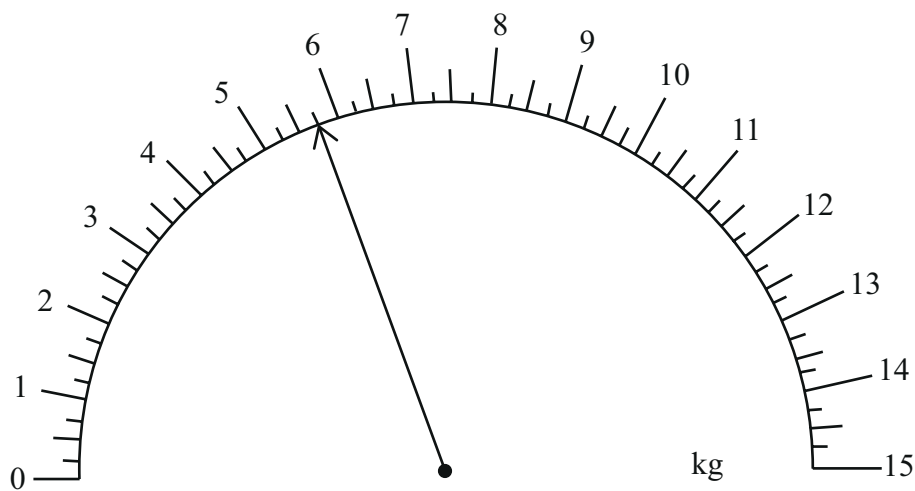


1 (a) Write down the temperature shown on the thermometer.



Answer _____ °C [1]

(b) (i) Write down the weight shown by the arrow below.



Answer _____ kg [1]

(ii) An extra 3.5 kg is added.
Draw an arrow to show the **total** weight now on the scale. [2]

Examiner Only

Marks Remark

Total Question 1

[Turn over



Quality of written communication will be assessed in this question.

- 3 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 double time on Sunday.
Last week she worked 6 hours on Monday, 6 hours on Saturday and 4 hours on Sunday.
How much did she earn in total?
Show your work clearly.

Answer £ _____ [5]

Examiner Only

Marks Remark

Total Question 3

[Turn over



- 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.

$$\text{Total monthly salary} = \text{£1800} + \text{Number of cars sold} \times \text{Bonus per car sold}$$

- (a) Eileen is a car salesperson with NewAutos.
She sold 15 cars in April.
Work out her total monthly salary for April.

Answer £ _____ [2]

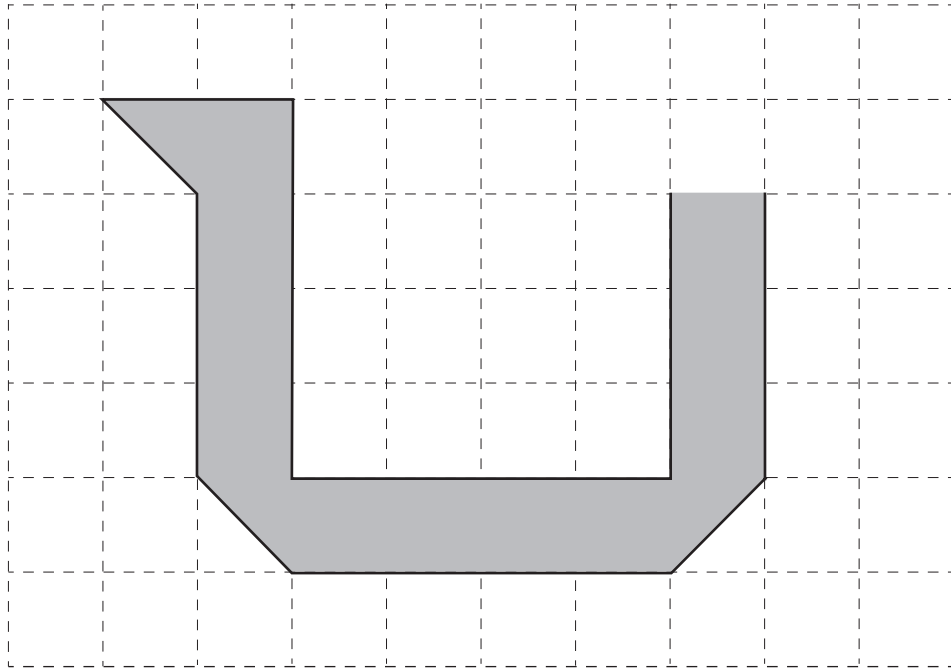
- (b) Jim is another car salesperson with NewAutos.
In May his total monthly salary was £3525
Work out how many cars Jim sold in May.

Answer _____ cars [2]

Examiner Only	
Marks	Remark
Total Question 4	

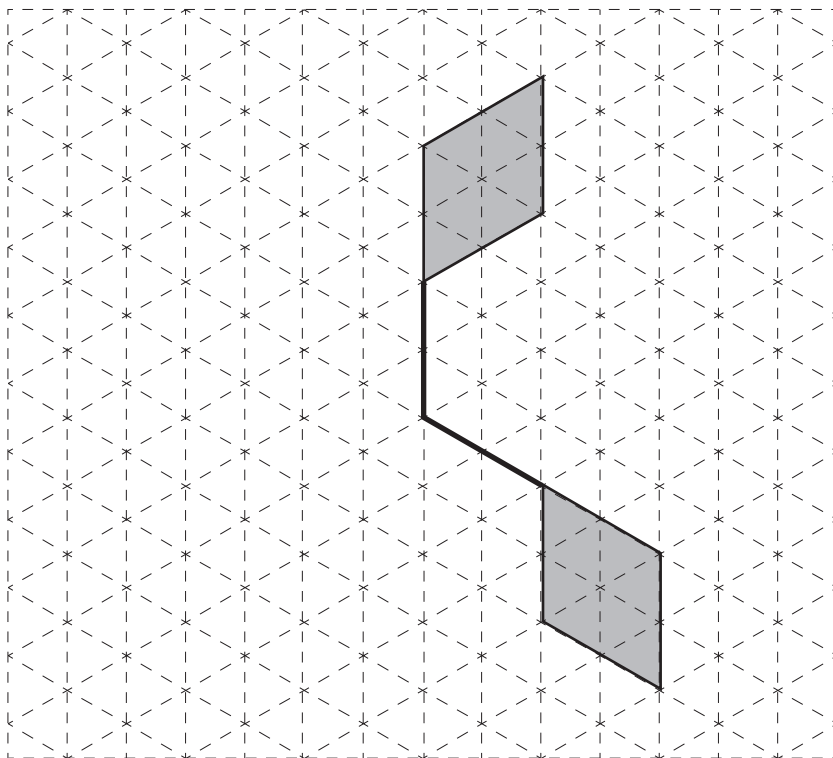


- 5 (a) Shade one square and one triangle in the diagram so that the complete shaded shape has one line of symmetry.



[2]

- (b) Complete the shape **below** so that the completed shape has rotational symmetry of order 3.



[2]

Examiner Only

Marks	Remark

Total Question 5

[Turn over



6 Mary has 63 square tiles and she wants to arrange them all to make a rectangle.

Write down the length and width of two **different** rectangles that she could make.

Answer 1st rectangle length _____, width _____ [1]

2nd rectangle length _____, width _____ [1]

Examiner Only	
Marks	Remark
Total Question 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) 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 Question 7	



- 8 Bradley was cycling at an average speed of 25 mph.
Convert this speed to km/h.

Answer _____ km/h [2]

Examiner Only

Marks Remark

Total Question 8

- 9 A box contains a number of packets of crisps of different flavours.
A packet of crisps is taken at random from the box.
Some of the probabilities of taking each flavour are shown in the table below.

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 **not** Vinegar flavour.

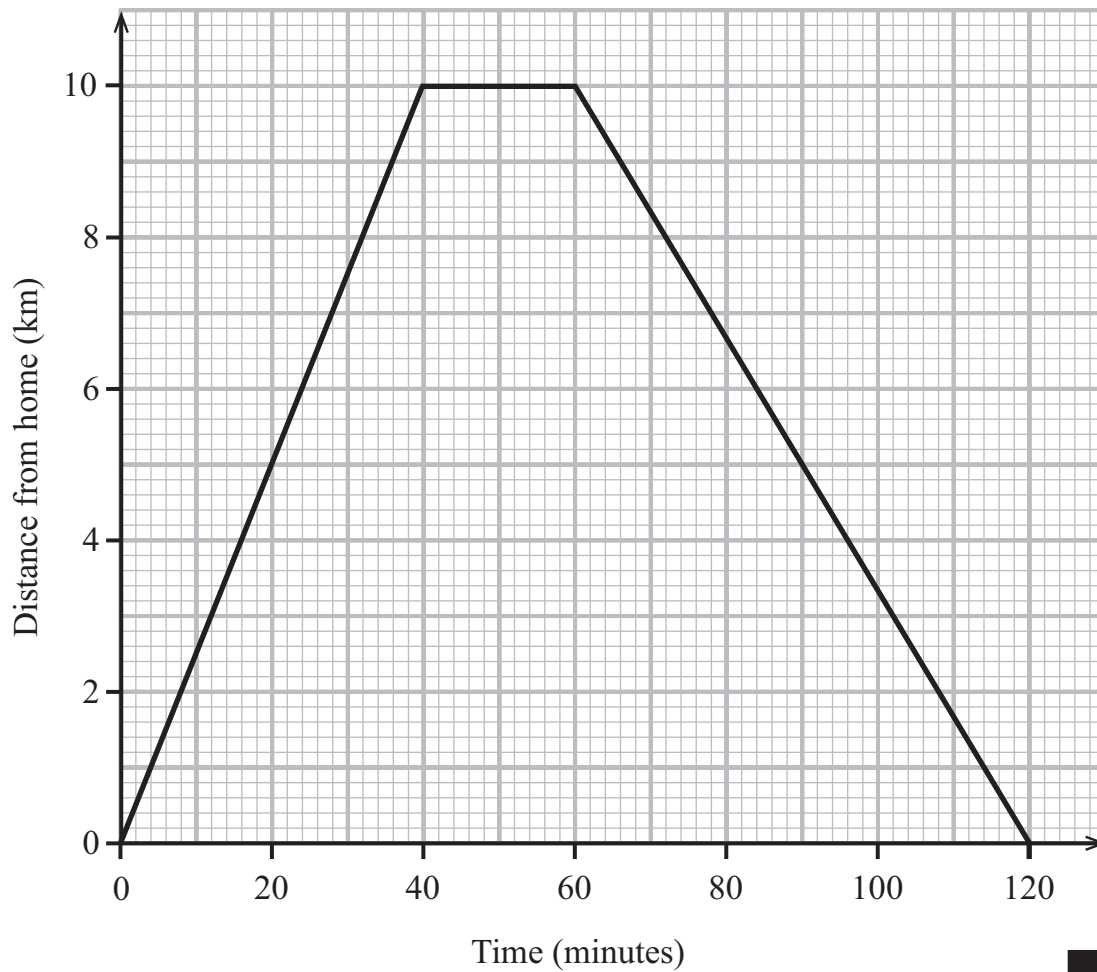
Answer _____ [1]

Total Question 9

[Turn over



- 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?

Answer _____ [1]

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

Answer _____ km [1]

Examiner Only	
Marks	Remark



(c) How long did it take her to travel the first 4 kilometres?

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]

(f) 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]

Examiner Only

Marks Remark

Total Question 10

[Turn over



(b) The spinner is spun 60 times. How many times would you expect it to land on a number greater than 2?

Answer _____ [2]

Examiner Only	
Marks	Remark
Total Question 11	
Total Question 12	

12 Divide £292 in the ratio 1 : 3 : 4

Answer _____, _____, _____ [3]

[Turn over



THIS IS THE END OF THE QUESTION PAPER



DO NOT WRITE ON THIS PAGE

For Examiner's use only	
Question Number	Marks
1	
2	
3	
4	
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10	
11	
12	
13	

Total Marks	
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Examiner Number

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