



Rewarding Learning

General Certificate of Secondary Education
January 2013

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Candidate Number

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Mathematics

Unit T5 Paper 1

(Non-calculator)

Foundation Tier



[GMT51]

GMT51

TUESDAY 15 JANUARY 1.30 pm – 2.30 pm

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 in pencil or with a gel pen.**

Answer **all fifteen** questions.

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

You **must not** 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 **question 1**

You should have a ruler, compasses and a protractor.

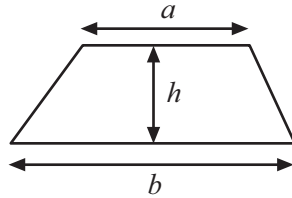
The Formula Sheet is on page 2.

8125

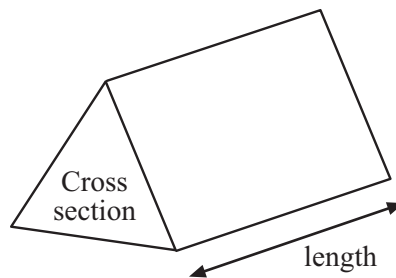


Formula Sheet

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



Volume of prism = area of cross section \times length



**1 Quality of written communication will be assessed in this question.
Show your working.**

Aaron and Bob bought new beds in two different shops.

Aaron paid £220 deposit and £30 per month for 8 months.

Bob made one payment of £500.

Who paid less for the bed and how much less did they pay?

Answer _____ paid £ _____ less [4]

Examiner Only

Marks

Remark

Total Question 1

[Turn over



2 In a school Superleague, points are awarded using the formula:
Number of Points = $4 \times \text{games won} + 2 \times \text{games drawn} - 1 \times \text{games lost}$

Year 8, 9 and 10 **each play 10 matches.**

(a) Year 8 won 6 games, drew 2 and lost 2. How many points were awarded?

Answer _____ [2]

(b) Year 10 won 3 games, drew 6 and lost 1. How many points were awarded?

Answer _____ [1]

(c) Year 9 won 4 games but finished with 28 points.
How many games did they draw?

Answer _____ [2]

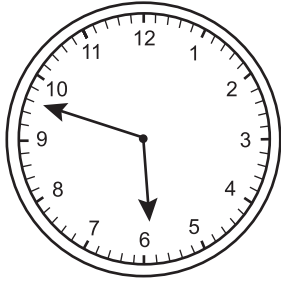
Examiner Only

Marks Remark

Total Question 2



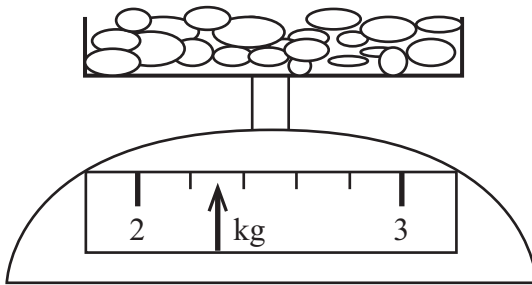
3 (a) Karen woke up early one morning. What time was it on her clock?



Answer _____ [2]

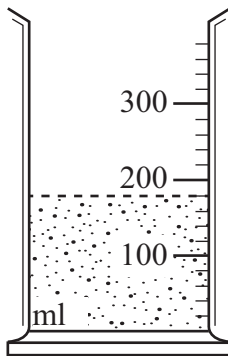
(b) Write down the reading on each of these scales.

(i)



Answer _____ kg [1]

(ii)



Answer _____ ml [1]

Examiner Only

Marks Remark

Total Question 3

[Turn over



4 (a) Estimate the total length of 53 buses whose average length is 8.7 metres.

Answer _____ m [2]

(b) Estimate how many books costing £7.95 each could be bought for £74.

Answer _____ books [2]

(c) Estimate the area of a rectangular garden with length 29.6 metres and breadth 8.7 metres.

Answer _____ m² [2]

(d) Estimate $\sqrt{47}$

Answer _____ [1]

Examiner Only

Marks Remark

Total Question 4



5 Calculate

(a) $7 + 8 \div 2$

Answer _____ [1]

(b) $9 + 4(7 - 2)$

Answer _____ [1]

(c) $6 \times 3 + 15 \div 3$

Answer _____ [1]

Examiner Only

Marks Remark

Total Question 5

[Turn over

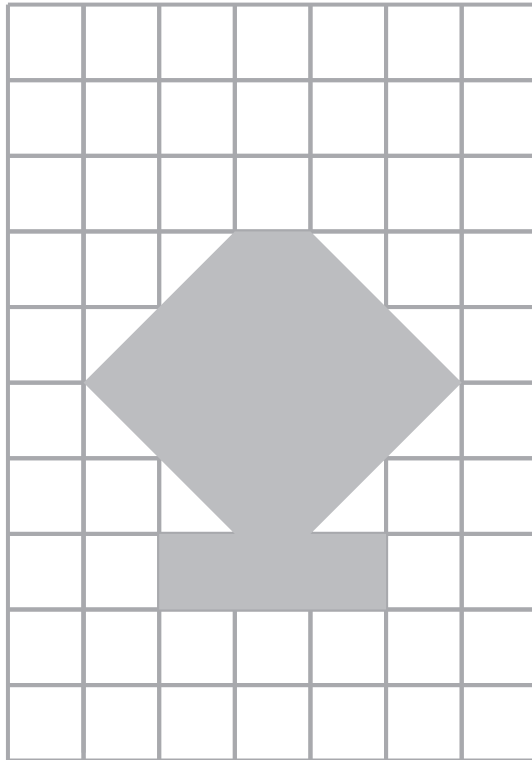


6 (a) How many lines of symmetry **in total** are there in the letters below?

M A T H

Answer _____ [2]

(b) Shade 3 squares to make a shape which has **two lines** of symmetry.



[1]

Examiner Only

Marks Remark

Total Question 6



7

There are **ten** beads in a bag.

2 are red, 2 are blue and the rest are yellow.

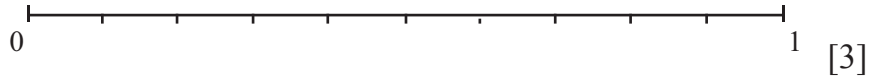
A bead is taken at random from the bag.

Mark the probability of each of the following events happening on the probability scale below using the capital letters.

R The bead taken is red

Y The bead taken is yellow

B The bead taken is black



Examiner Only

Marks Remark

Total Question 7

8 Write down the reciprocal of 7

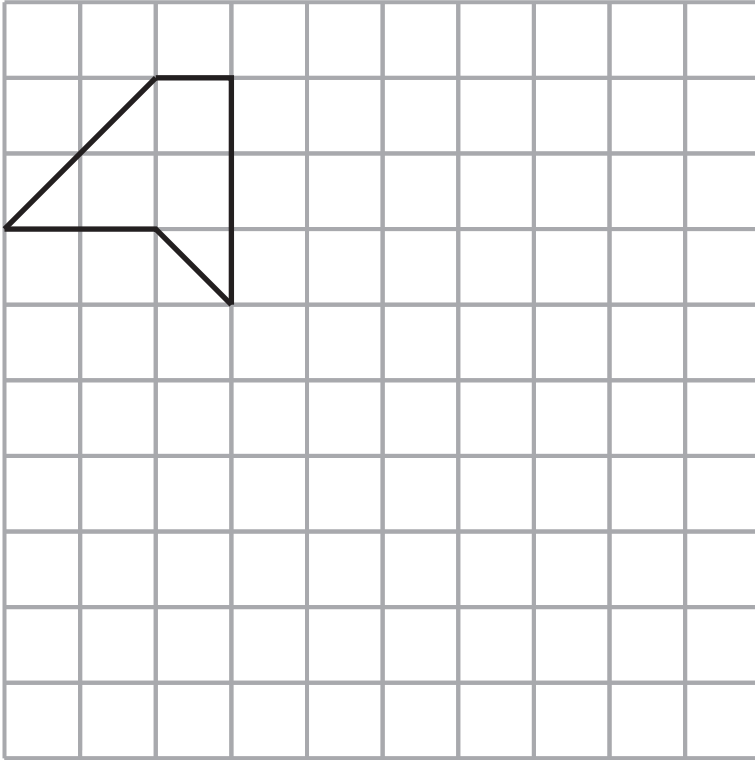
Answer _____ [1]

Total Question 8

[Turn over



9 Enlarge the shape below using a scale factor of 2



[2]

Examiner Only

Marks Remark

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Total Question 9

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10 A spinner with equal sized sections is numbered

2, 3, 4 and 6

The spinner is spun twice.

The numbers the spinner points to are **added** together to give a total score.

(a) Complete the table to show all the possible total scores.

+	2	3	4	6
2				
3				
4				
6				

[2]

(b) Write down the probability that the total score is **more than 8**

Answer _____ [2]

Examiner Only

Marks

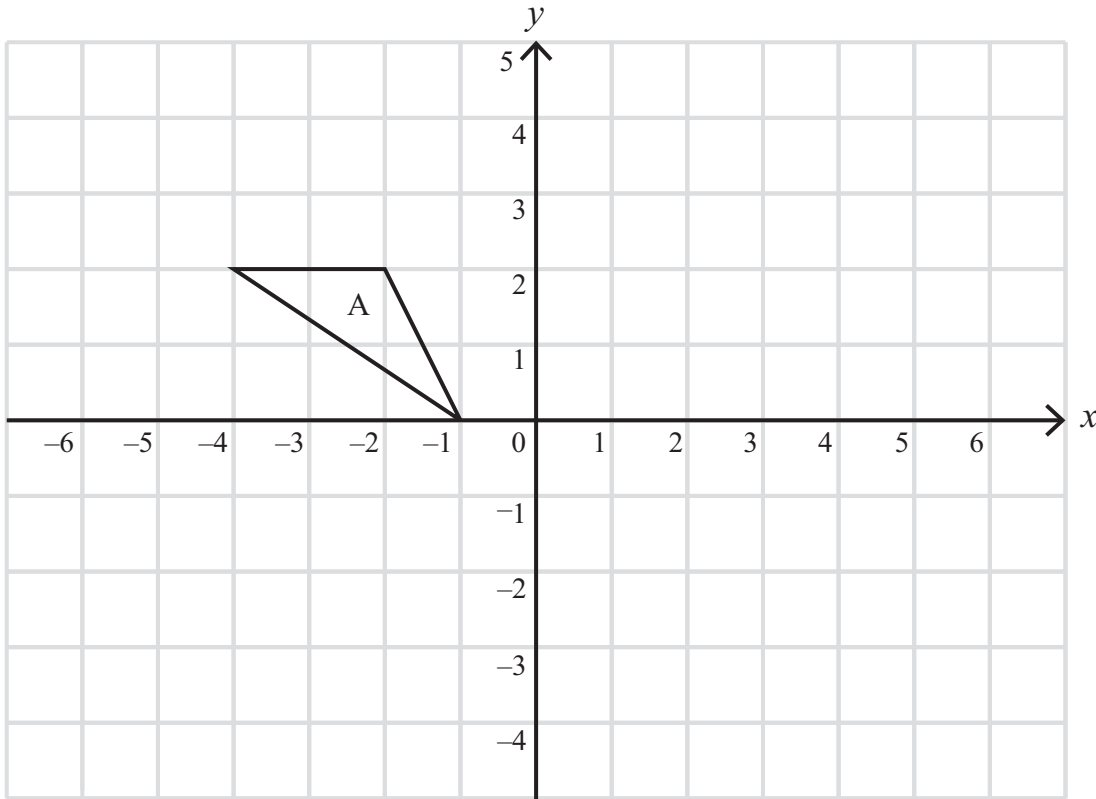
Remark

Total Question 10

[Turn over



11 (a) Reflect triangle A in the line $x = 1$



[2]

(b) Translate triangle A by $\begin{pmatrix} 3 \\ -5 \end{pmatrix}$.

[2]

Examiner Only	
Marks	Remark
Total Question 11	
Total Question 12	

12 $W = \frac{Y(X - 2)}{4}$

Find the value of W when $X = 8$ and $Y = -2$

Answer W = _____ [3]



13 Simplify $(p^4)^2$

Answer _____ [1]

Examiner Only

Marks	Remark
Total Question 13	

14 Estimate $\frac{703 \times 3.82}{0.91 - 0.69}$

Answer _____ [3]

[Turn over



15 Helen runs up a hill at 4 km per hour.

It takes her 1 hour to reach the top.

She turns at the top and runs back down again
at 6 km per hour.

How long in total does it take her to run up and
down?

Answer _____ [3]

Examiner Only

Marks Remark

Total Question 15





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	
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5	
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15	

Total Marks	
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Examiner Number

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