



Rewarding Learning

General Certificate of Secondary Education  
January 2014

--	--	--	--	--

Candidate Number

--	--	--	--

StudentBounty.com

## Mathematics

Unit T5 Paper 1

(Non-calculator)

Foundation Tier



ML

[GMT51]

WEDNESDAY 15 JANUARY 9.15am-10.15am

### TIME

1 hour, plus your additional time allowance.

### 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.**

Complete in blue or black ink only.

Answer **all eighteen** 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.

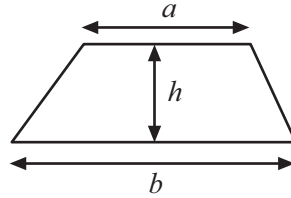
Quality of written communication will be assessed in **question 11**.

You should have a ruler, compasses and a protractor.

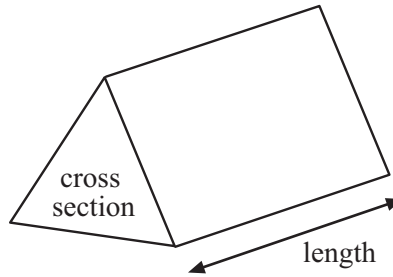
The Formula Sheet is on page 2.

# Formula Sheet

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



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



1 (a) Estimate  $108 \times 7.8$

Answer \_\_\_\_\_ [2]

(b) Estimate how many books you can buy for £48 if each book costs £7.95

Answer \_\_\_\_\_ [2]

(c) Estimate  $\sqrt{75}$

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

(d) Write 4387 correct to the nearest 100

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

(e) Round 19.0396

(i) to two decimal places,

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

(ii) to three decimal places.

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

Examiner Only

Marks Remark

Total Question 1

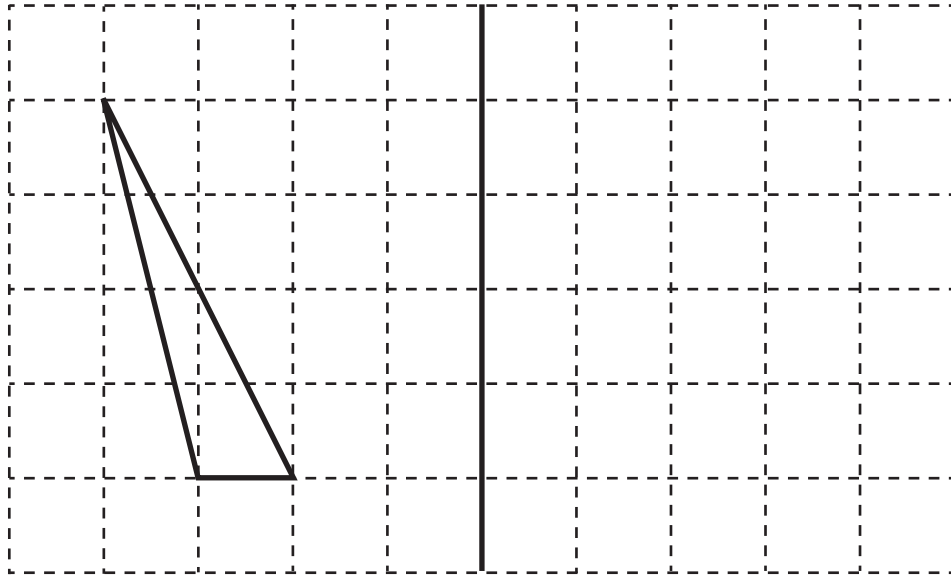
[Turn over



3 Draw the reflection in the mirror line of each of the given shapes.

(a)

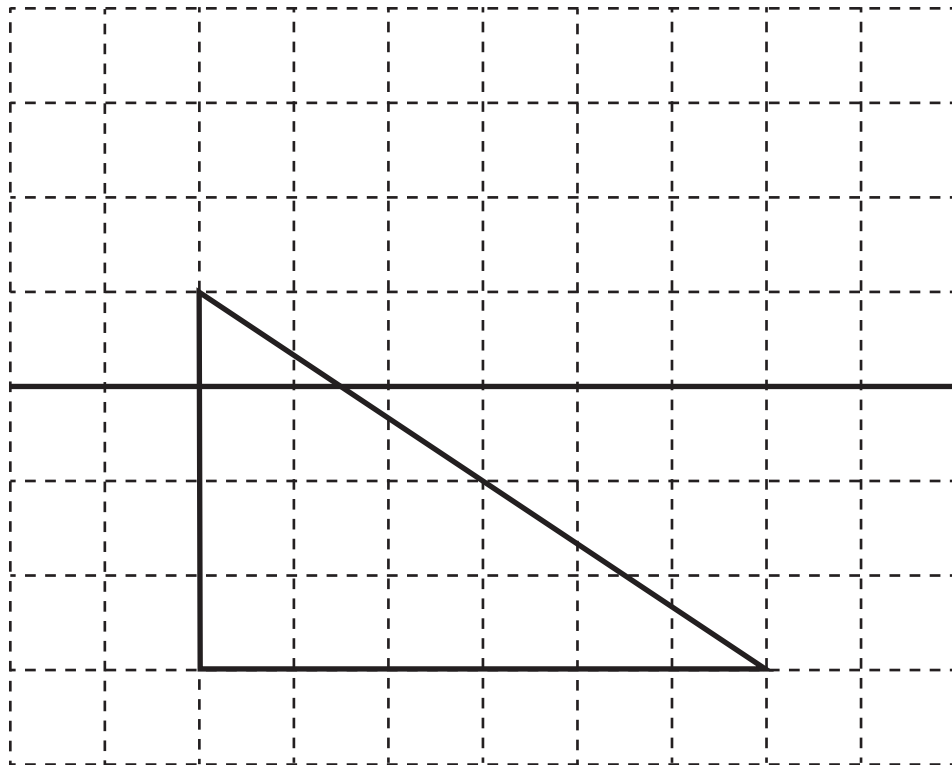
mirror  
line



[2]

(b)

mirror line



[2]

Examiner Only

Marks

Remark

Total Question 3

[Turn over

4 Molly works out that the telephone calls to her house are:

72% for her mother      15% for her father  
12% for Molly            1% for her brother

**unlikely                      certain                      impossible**  
**evens                        likely**

From the list of words in the box above, choose the best word to describe the probability that the next telephone call to Molly's house is for

- (a) Molly                                      Answer \_\_\_\_\_ [1]
- (b) her mother                              Answer \_\_\_\_\_ [1]
- (c) her aunt                                      Answer \_\_\_\_\_ [1]

Examiner Only	
Marks	Remark
Total Question 4	

5 Andy visits schools using his own car.  
His daily pay is calculated using the formula below.

**Daily pay = £120 + number of miles travelled × rate per mile**

The rate per mile is £0.50  
One day Andy travelled a total of 48 miles.  
Work out his pay for that day.

Answer £ \_\_\_\_\_ [2]

Total Question 5	

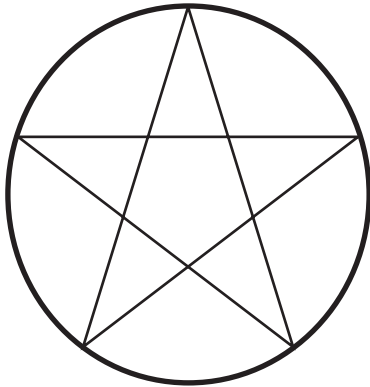
6 Calculate the value of  $24 - 3 \times 2$

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

Examiner Only

Marks	Remark
Total Question 6	

7 (a) (i)

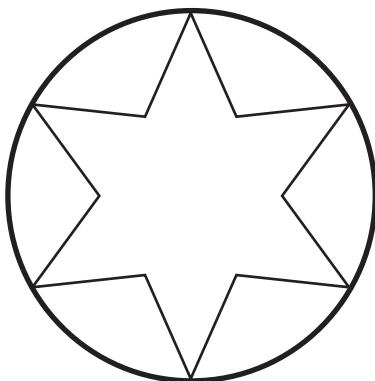


What is the order of rotational symmetry of the shape above?

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

(ii) Draw **all** the lines of symmetry on the shape **above**. [2]

(b) Mark with an X the centre of rotational symmetry on the shape below.

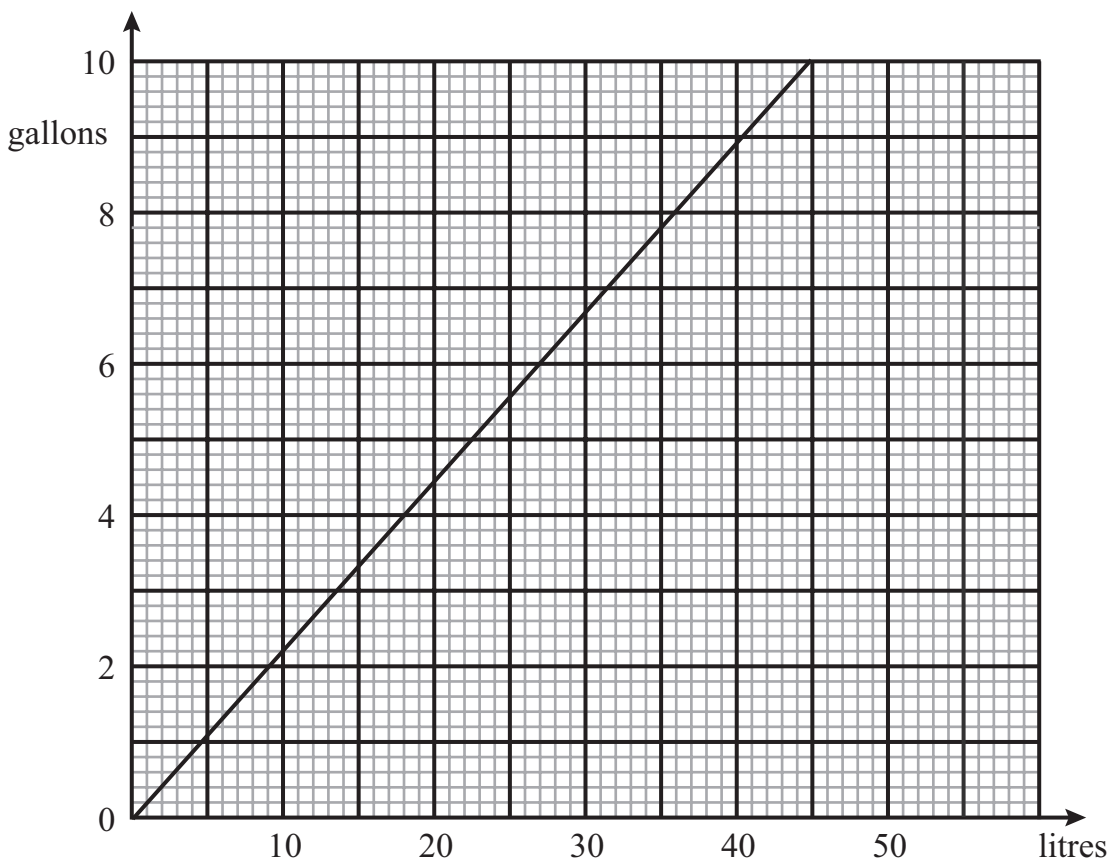


[1]

Total Question 7

[Turn over

8 The graph below can be used to convert between litres and gallons.



(a) Use the graph to work out the number of litres that are equivalent to 8 gallons.

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

(b) Use the graph to work out the number of gallons that are equivalent to 25 litres.

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

Examiner Only	
Marks	Remark
Total Question 8	
Total Question 9	

9 Work out the value of  $p - 2q - 3r$  when  $p = 5$ ,  $q = 3$  and  $r = 4$

Answer \_\_\_\_\_ [2]



10 Each letter of the alphabet is written on a tile. The 26 tiles are put in a bag.  
One tile is chosen at random from the bag.

(a) Write down the probability that the letter on the tile is Q.

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

(b) Write down the probability that the letter on the tile is a letter from the word MATHEMATICS.

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

Examiner Only	
Marks	Remark
Total Question 10	

**Quality of written communication will be assessed in this question.**

11 Peter says,

“When you add any two prime numbers together you **always** get an even number as the answer.”

Use an example to show that Peter is not correct.

[2]

Total Question 11	

**[Turn over**

12 Write down how many significant figures there are in

(a) 603.9

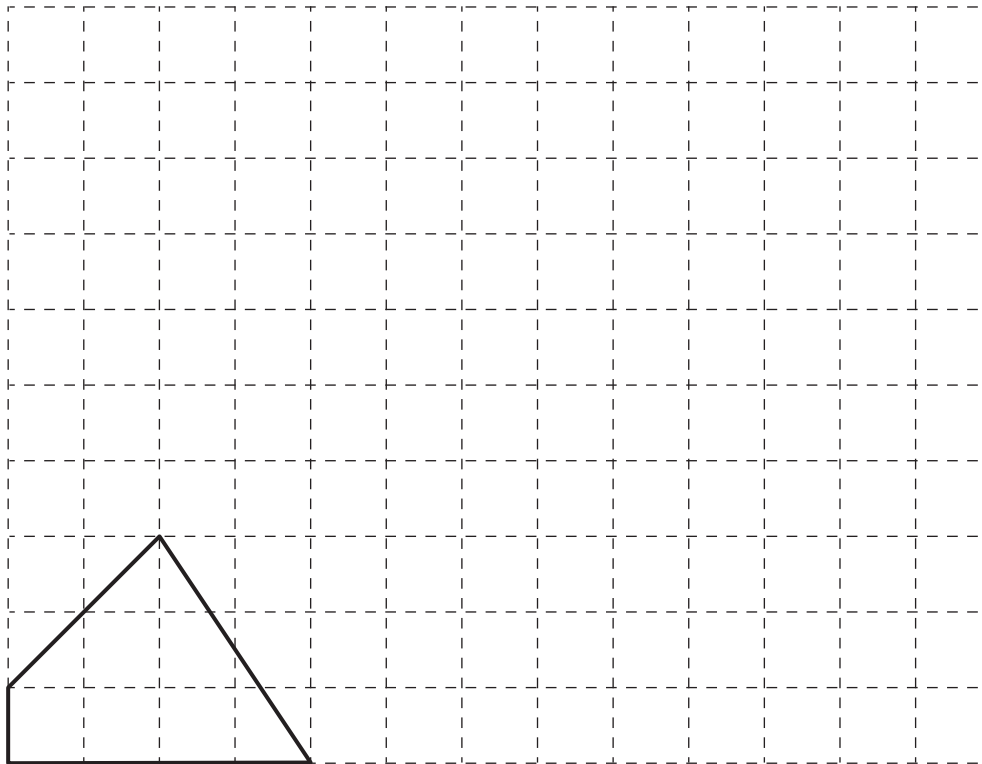
Answer \_\_\_\_\_ [1]

(b) 0.00067

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

Examiner Only	
Marks	Remark
Total Question 12	

13 Enlarge the shape below by scale factor 3



[2]

Total Question 13	

14 Mr Davison plans a school trip. He uses the information below.

For every 20 pupils you will need

- 16 bottles of milk
- 24 rounds of sandwiches
- 10 bars of chocolate

50 pupils go on the school trip.  
How much of each of these would you need?

\_\_\_\_\_ bottles of milk

\_\_\_\_\_ rounds of sandwiches

\_\_\_\_\_ bars of chocolate

[3]

Examiner Only

Marks Remark

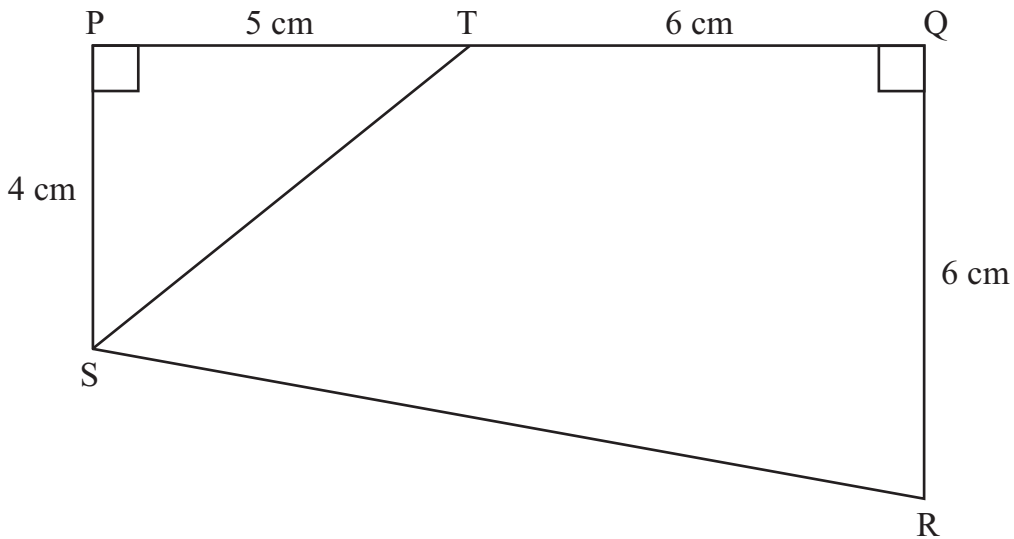
Total Question 14

[Turn over

15 PQRS is a trapezium. PS and QR are perpendicular to the line PQ.

PT = 5 cm, TQ = 6 cm, PS = 4 cm and QR = 6 cm.

Diagram not drawn accurately



(a) Find the area of the trapezium PQRS.

Answer \_\_\_\_\_ cm<sup>2</sup> [2]

(b) Find the area of the quadrilateral TQRS.

Answer \_\_\_\_\_ cm<sup>2</sup> [2]

Examiner Only	
Marks	Remark
Total Question 15	

16 Find the reciprocal of 1.2

Answer \_\_\_\_\_ [2]

Examiner Only

Marks Remark

Total Question 16

17 Solve the inequality  $-2 < 3n \leq 12$  where  $n$  is an integer.  
List all values of  $n$ .

Answer \_\_\_\_\_ [3]

Total Question 17

18 There is a box with some pens in it. There are 8 black, 6 blue, 4 green and the rest are red.  
The probability of taking a red pen from the box is  $\frac{1}{10}$   
How many red pens are in the box?

Answer \_\_\_\_\_ [2]

Total Question 18

8694.04 ML

---

**THIS IS THE END OF THE QUESTION PAPER**

---





**DO NOT WRITE ON THIS PAGE**

8694.04 ML

**DO NOT WRITE ON THIS PAGE**

For Examiner's use only	
Question Number	Marks
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	

<b>Total Marks</b>	
--------------------	--

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.

8694.04 ML