



Rewarding Learning

General Certificate of Secondary Education  
2014

Centre Number

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Candidate Number

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## Mathematics

Unit T5 Paper 2

(With calculator)

Foundation Tier



[GMT52]

FRIDAY 30 MAY, 3.00 pm–4.00 pm

ML

### 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 **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.

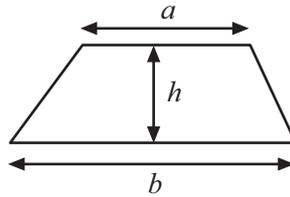
Quality of written communication will be assessed in **question 8**.

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

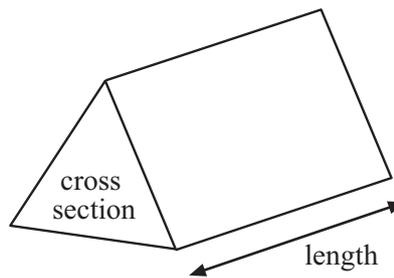
The Formula Sheet is on page 2.

# Formula Sheet

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



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



1 Look at the list of words, in bold, below.

**Impossible**      **Unlikely**      **Evens**      **Likely**      **Certain**

From the list, write the word that best describes the probability of

- (a) rolling a score of less than 5 on a fair dice, \_\_\_\_\_ [1]
- (b) the winning time in the 2016 Marathon being under 3 minutes, \_\_\_\_\_ [1]
- (c) choosing a letter at random from the letters in the word 'bear' and getting a vowel. \_\_\_\_\_ [1]

Examiner Only

Marks      Remark

Total Question 1

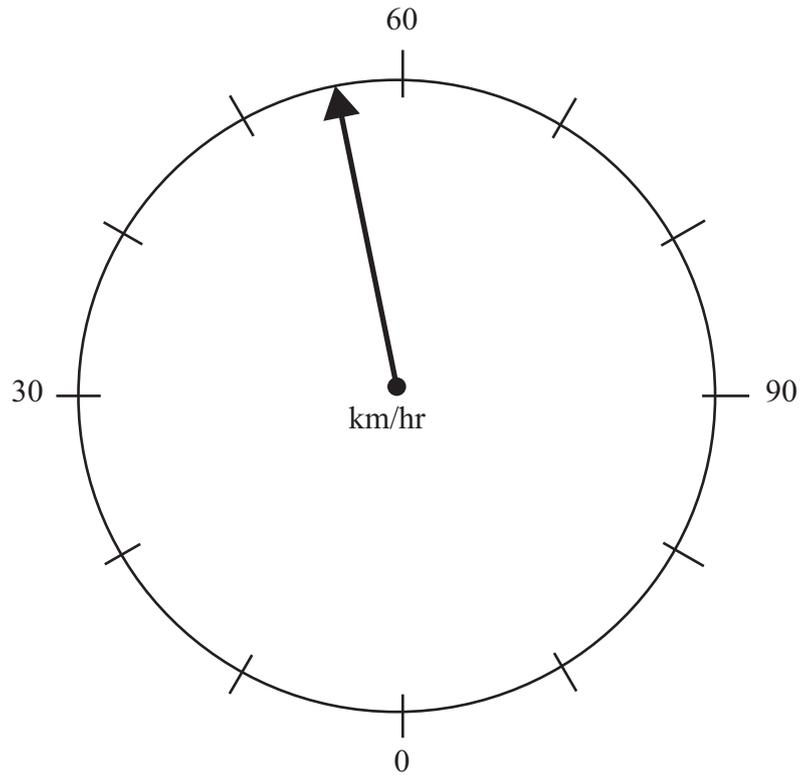
2 I have £2.75. Apples cost 38p each. Estimate how many apples I can buy.  
**Show your working out clearly.**

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

Total Question 2

[Turn over

3 The picture shown below is a speedometer on a car.



(a) Write down the speed that the arrow is pointing to.

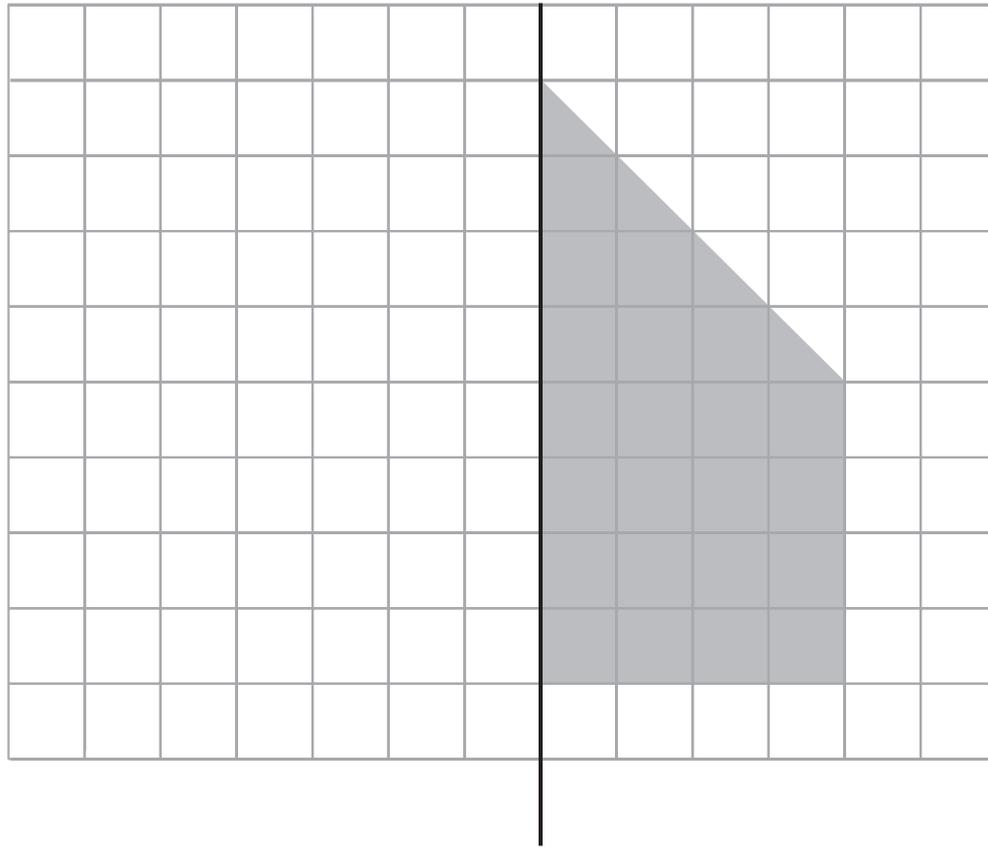
Answer \_\_\_\_\_ km/hr [1]

(b) Mark clearly with an arrow a speed of 83 km/hr.

[1]

Examiner Only	
Marks	Remark
Total Question 3	

4



mirror  
line

- (a) Draw the reflection of this shape in the mirror line. [2]
- (b) Now find the area of the whole shape.

Examiner Only	
Marks	Remark

Total Question 4

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

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[Turn over

5 A taxi firm displays their fares as shown

<p><b>Fixed charge of £1.50 plus 75 pence per mile</b></p>
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- (a) Joe's fare was £10.50  
How many miles did he travel?

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

- (b)  $m$  represents the number of miles travelled.  
Which formula represents the fare  $F$  (in £) of the taxi firm?  
Circle the correct answer.

$F = 1.50m + 75$      $F = 150 + 75m$      $F = 1.50 + 0.75m$      $F = 1.50m + 0.75$

[1]

Examiner Only	
Marks	Remark
Total Question 5	

6

Please send me	Number	Price	Sub Total
OM Olympics Mug		£10.99	
OH Olympics Ski Hat		£16.49	
OG Olympics Medallion		£21.50	
OS Souvenir Set		£31.99	
Special delivery			6.85
Total £			

Complete the mail order form for **three** Olympics mugs and **one** souvenir set, including Special delivery.

[3]

Total Question 6	



Quality of written communication is assessed in part (c) of this question.

- 8 A boy has a combination lock for his bicycle.  
He knows the 3 digits needed to open the lock are 1, 4, and 7  
He does not know which order to put them in.

- (a) Fill in the boxes to show all the different ways he can arrange the 3 digits.

1 4 7
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4 1 7
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[2]

- (b) He tries to guess his combination.  
What is the probability he guesses right the first time?

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

- (c) A girl knows her combination lock uses the numbers 5, 8, 8  
She also guesses her combination.  
Who has more chance of guessing their own combination right the first time, the boy or the girl? Explain your answer.

\_\_\_\_\_

\_\_\_\_\_

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

Examiner Only	
Marks	Remark
Total Question 8	

- 9 Only two four-sided shapes have exactly two lines of symmetry and rotational symmetry of order 2  
Name these two shapes.

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

Total Question 9	

10 (a) Write 5.99 correct to **1 decimal place**.

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

(b) Write 0.0362 correct to **3 decimal places**.

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

(c) Write 0.06402 correct to **2 significant figures**.

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

Examiner Only

Marks	Remark
Total Question 10	

11 Find a number which makes this statement correct.

$$\text{number} + 3 = \text{number} \times 3$$

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

Total Question 11

12 The exchange rate between sterling and euro is £1 = €1.20

(1 pound = 1.20 euro).

A kite costs €15

How much does the kite cost in pounds (£)?

Answer £ \_\_\_\_\_ [2]

Total Question 12

13 80 rail passengers bought tickets in a train station.

32 of these passengers were less than 30 years old.

If 5000 passengers bought tickets at this station, estimate how many passengers would be less than 30 years old.

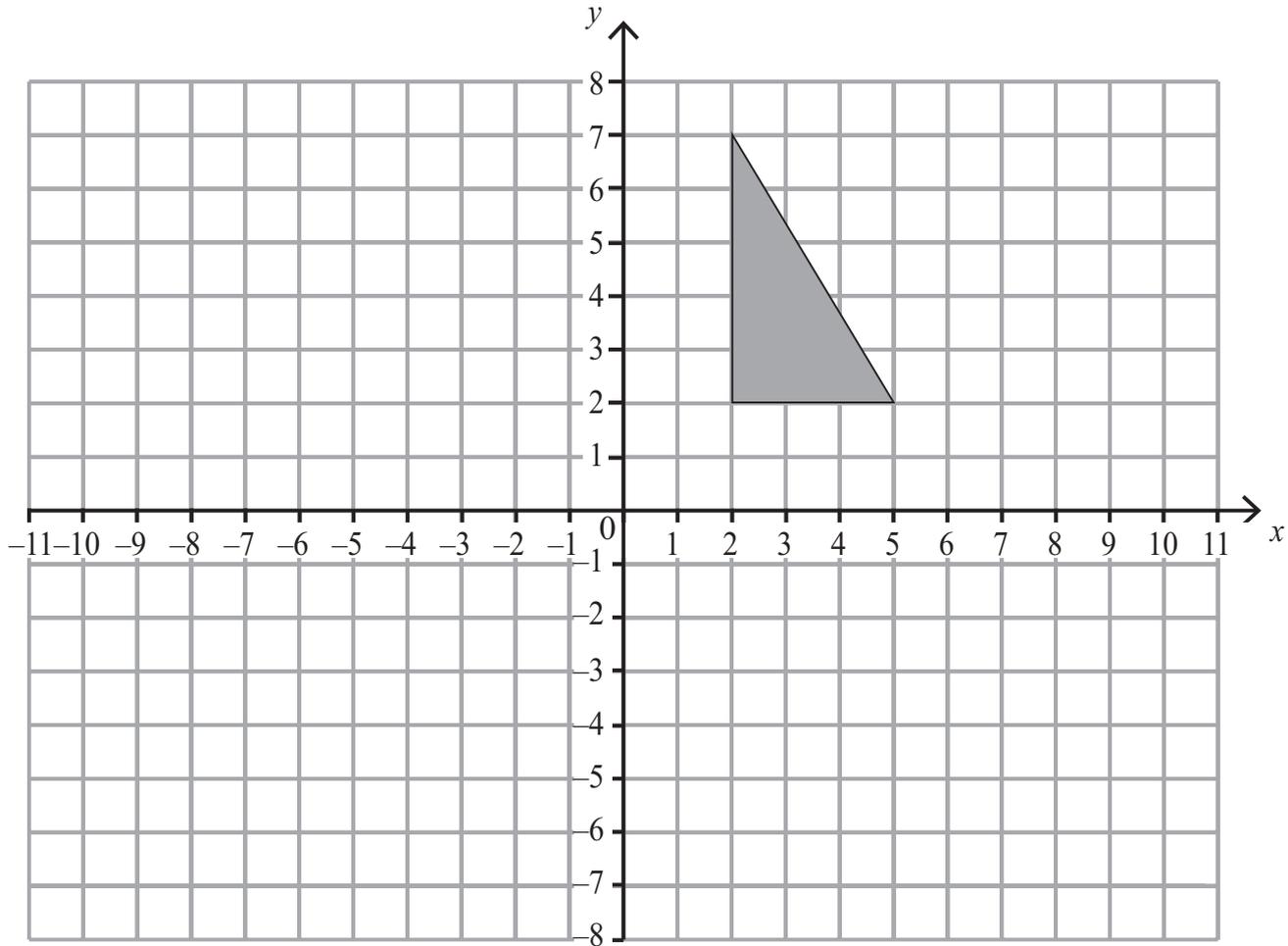
Answer \_\_\_\_\_ [2]

Total Question 13

[Turn over



15



Draw and shade the image of the triangle after a reflection in the line  $y = 1$  [2]

Examiner Only	
Marks	Remark
Total Question 15	

[Turn over

- 16 John and Mary share £840 in the ratio 2 : 5  
How much more money does Mary get than John?

Answer £ \_\_\_\_\_ [2]

Examiner Only	
Marks	Remark
Total Question 16	
Total Question 17	

- 17 Find the reciprocal of 1.4  
Write your answer as a fraction in its simplest terms.

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

18 Simplify  $k^3 \times k^3$

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

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

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Examiner Only

Marks	Remark
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Total Question 18	

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For Examiner's use only	
Question Number	Marks
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<b>Total Marks</b>	
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Examiner Number

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