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General Certificate of Secondary Education  
2013

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Candidate Number

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## Mathematics

Unit T1

(With calculator)

Foundation Tier



[GMT11]

\*GMT11\*

TUESDAY 11 JUNE, 9.15 am–10.45 am

### TIME

1 hour 30 minutes.

### 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 twenty-four** 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 100.

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 22**.

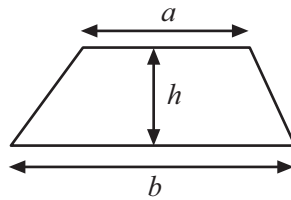
You should have a calculator, ruler, compasses and a protractor.

The Formula Sheet is on page 2.

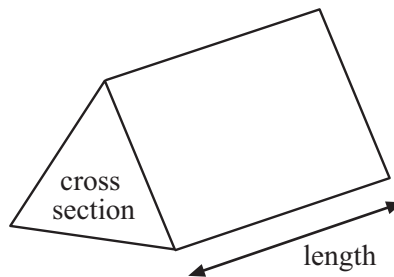


# Formula Sheet

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

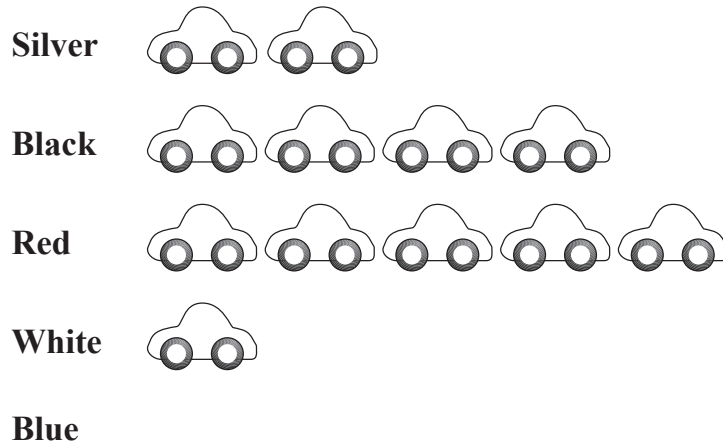


$$\text{Volume of prism} = \text{area of cross section} \times \text{length}$$




- 1 60 cars were sold in a garage. The first four rows of the pictogram are shown below.

### Car Sales



- (a) 20 red cars were sold.

Complete the key:  = \_\_\_\_\_ cars [1]

- (b) How many black cars were sold?

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

- (c) How many more red cars than silver cars were sold?

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

- (d) Complete the row of the pictogram for blue cars. [2]

Examiner Only

Marks	Remark
Total Question 1	

[Turn over



2 (a) Write nine thousand in figures.

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

(b) Circle three numbers below that round to nine thousand to the nearest thousand.

9473    90003    8977    899    9511    8495    8500    [3]

Examiner Only	
Marks	Remark
Total Question 2	
Total Question 3	

3 Here are five digits.      5    1    8    7    3

(a) Use **all** of the digits to write the largest possible number.

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

(b) Use **four** of the digits to write an even number.

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

(c) Use **two** of the digits to write a multiple of 7

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

(d) Use **two** of the digits to write a square number.

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

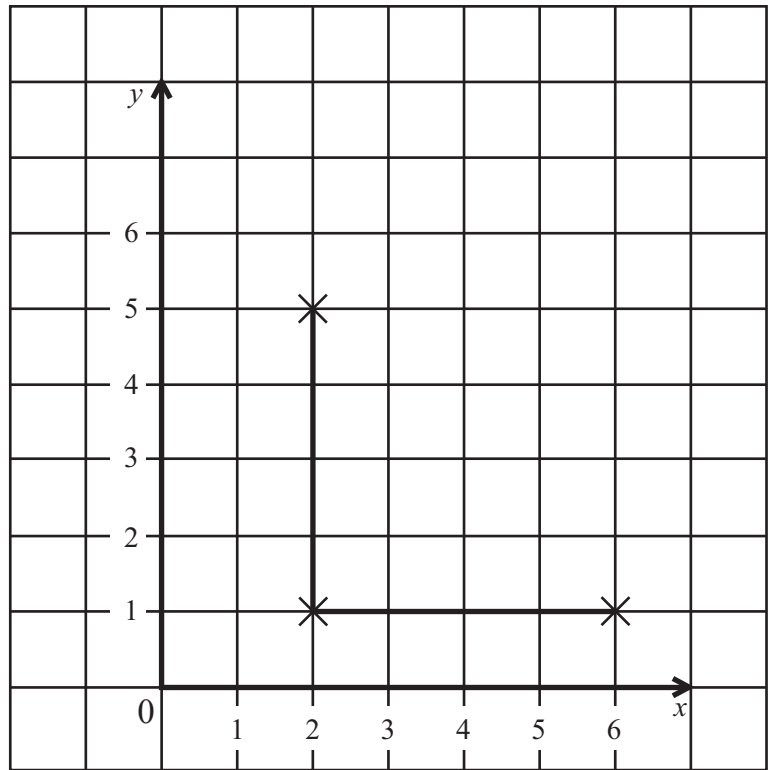
(e) Use **four** of the digits to write **two** numbers that add up to 70

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



- 4 (a) Phillip is plotting points to form a square. He has plotted 3 points and drawn 2 sides. Write down the co-ordinates of the 4th corner.

Answer (\_\_\_\_, \_\_\_\_ ) [2]



- (b) The first 4 odd numbers are 1, 3, 5, 7

What number is 1 less than the 10th odd number?

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

Examiner Only	
Marks	Remark
Total Question 4	

[Turn over



5 (a) Name a quadrilateral with

(i) two pairs of equal sides but no parallel sides,

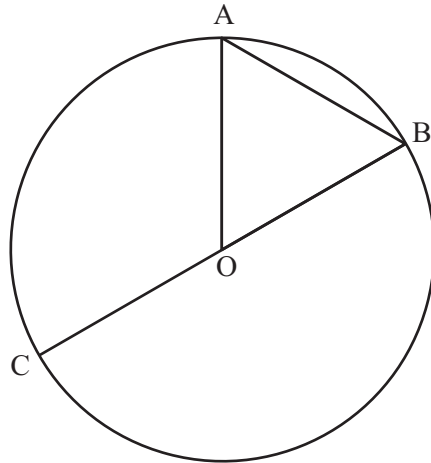
Answer \_\_\_\_\_

[1]

(ii) only one pair of parallel sides.

Answer \_\_\_\_\_

[1]



O is the centre of the circle.

(b) Complete the sentences

(i) A, B and C are all points on the \_\_\_\_\_ of the circle.

[1]

(ii) The line OB is a \_\_\_\_\_ of the circle.

[1]

(iii) The straight line AB is a \_\_\_\_\_ of the circle.

[1]

(c) Shade a segment of the circle.

[1]

Examiner Only

Marks Remark

Total Question 5



- 6 (a) Tom is reading a book which contains 96 pages.  
He has read 25% of the book.  
How many pages of the book has he read?

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

- (b) Joan buys 9 scones costing 18p each.  
What change should she receive from £5?

Answer £ \_\_\_\_\_ [2]

- (c) Write this set of numbers in order of size.  
Start with the smallest number.

6,      -7,      -11,      3,      -5

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

- (d) Write this set of numbers in order of size.  
Start with the smallest number.

0.74,      0.089,      0.8,      0.85,      0.803

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

Examiner Only

Marks      Remark

Total Question 6

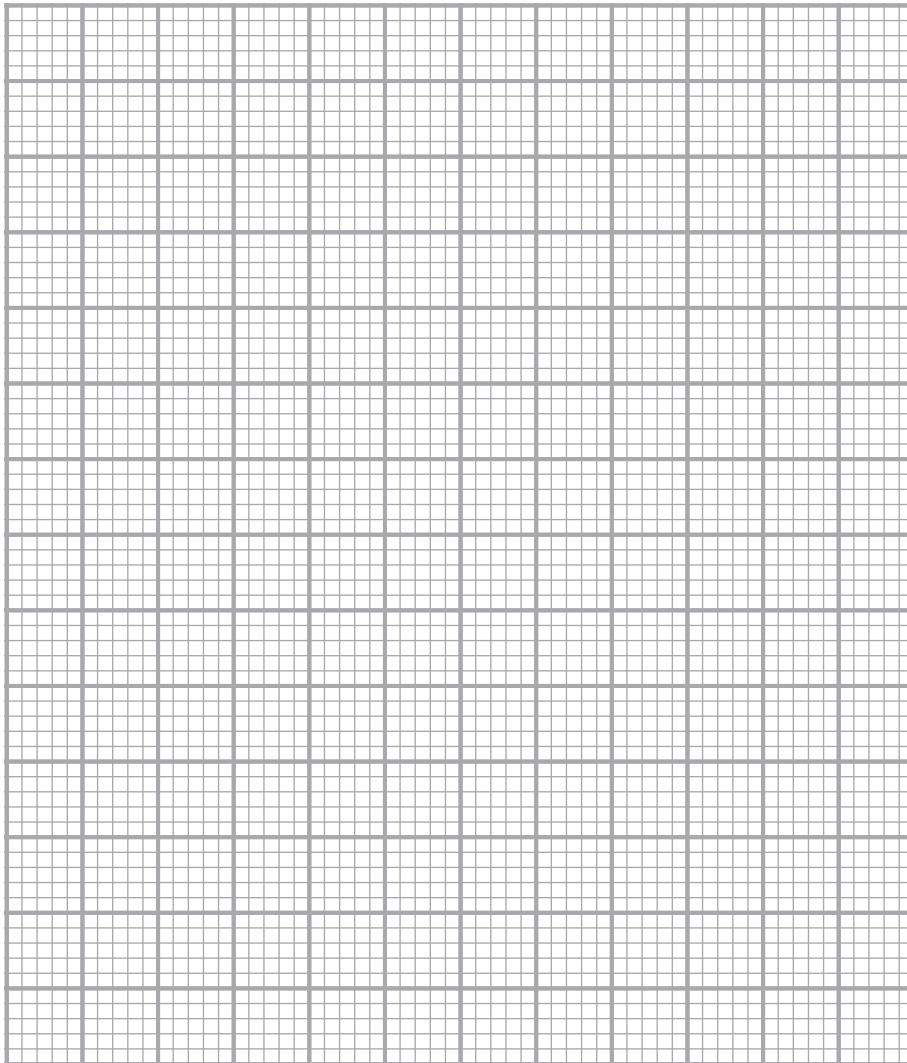
[Turn over



7 Vicky recorded the types of drinks sold from a drinks machine.

Type of Drink	Frequency
Coffee	7
Tea	13
Hot Chocolate	6
Cola	5
Orange	3

(a) On the graph paper, draw a bar chart to show this information.



[3]

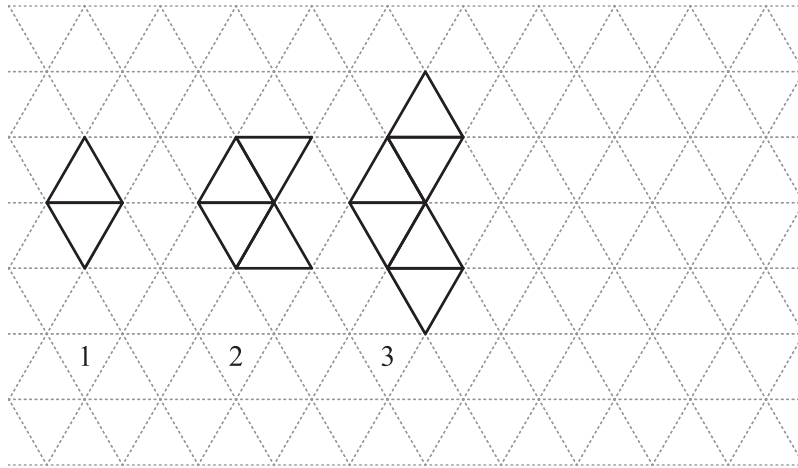
Examiner Only	
Marks	Remark







8 Sticks are used to make this pattern of shapes.



(a) Draw the 4th pattern and complete the table for the number of sticks.

Pattern Number	1	2	3	4
Number of Sticks	5	9	13	

[2]

(b) What pattern do you notice about the numbers in the “Number of Sticks” row?

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

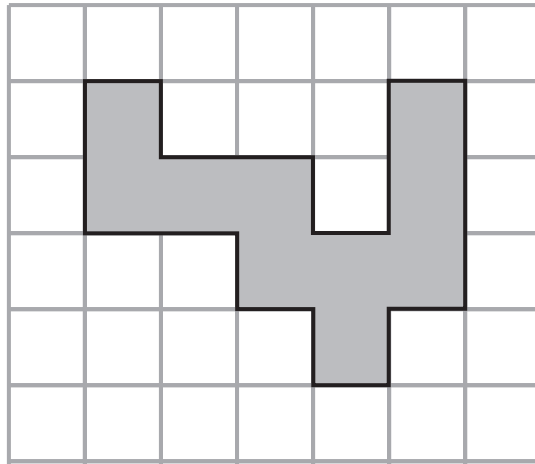
(c) Find the number of sticks in the 9th pattern.

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

Examiner Only	
Marks	Remark
Total Question 8	

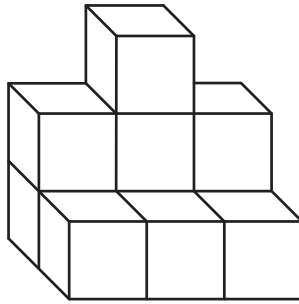


9 (a) A shape is drawn on a centimetre square grid.



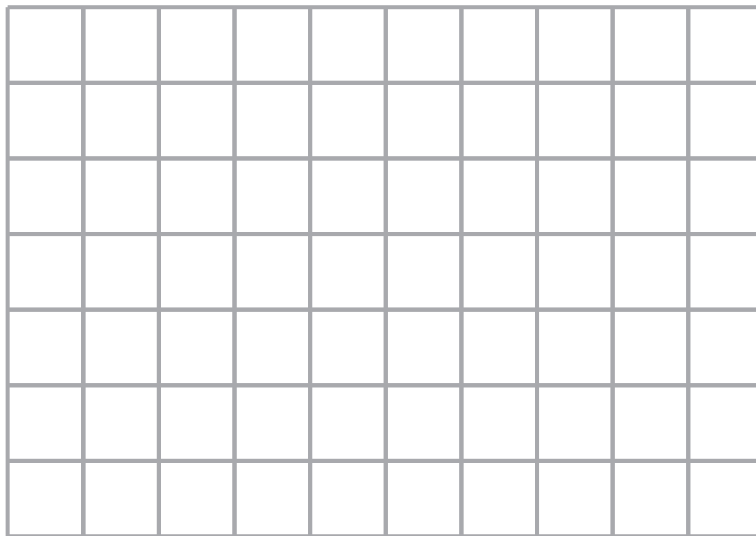
Work out the perimeter of the shape. Answer \_\_\_\_\_ cm [1]

(b) This symmetrical solid is made up of centimetre cubes.



(i) What is the volume of the solid? Answer \_\_\_\_\_ cm<sup>3</sup> [1]

(ii) On the grid below draw the front elevation of the solid.



[2]

Examiner Only

Marks Remark

Total Question 9

[Turn over







**12** The number of newspapers sold each hour in a small shop was recorded.

35      23      22      14      17      19      21      25

What was the mean number of newspapers sold?

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

Examiner Only	
Marks	Remark
Total Question 12	
Total Question 13	

**13** A bookshelf is 2.5 m wide.

How many books each of width 18 mm can be stored on the shelf?

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













18 Which of the following fractions is nearest in size to  $\frac{1}{4}$ ?

$$\frac{6}{25}$$

$$\frac{13}{50}$$

$$\frac{49}{200}$$

$$\frac{97}{400}$$

Show your work.

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

Examiner Only

Marks	Remark
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Total Question 18	

19 Construct a triangle ABC where AB is 8 cm, AC is 5 cm and angle A is  $55^\circ$

A ×

[2]

Total Question 19	

[Turn over



20 Calculate  $\frac{2}{0.5^2}$

Examiner Only	
Marks	Remark
Total Question 20	

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

21

**Timetable: Enniskillen Bus Centre – Omagh Bus Centre  
Service 94 (Monday–Friday)**

Calling points:

Enniskillen, Bus Centre	...	0655	0735	0740	0905	1130	1330	1545
Mullaghmeen, Village	...	...	...	...	...	...	...	...
Ballinamallard, Church	...	0710	...	0755	0920	...	1345	1605
Trillick, Warnock's Shop	...	0720	0802	0805	0930	...	1355	1615
Irvinestown, Bypass	...	...	...	...	...	1200	...	...
Dromore (Tyrone), Bypass	0727	0730	...	0815	0940	1220	1405	1625
Prices Shop, near Dromore	...	0738	...	0823	0948	1225	1413	1633
Omagh, Bus Centre	0752	0752	...	0850	1005	1240	1430	1655

- (a) The 0740 bus from Enniskillen is running 8 minutes late.  
At what time will it arrive in Ballinamallard?

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

- (b) A girl needs to be in Omagh for an appointment at 1.15 pm. She leaves Enniskillen on the latest possible bus to be in time for her appointment.  
How long will she have to spend in Omagh before the appointment?

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

Total Question 21	



Quality of written communication will be assessed in this question.

22 The boys in Class 12A scored the following goals in a penalty competition:

6, 10, 9, 8, 7, 6, 7, 10, 9, 8

The 8 boys in Class 12B scored a total of 72 goals.

Which class did better in the competition?

Explain your answer.

Answer \_\_\_\_\_

because \_\_\_\_\_

\_\_\_\_\_ [4]

Examiner Only

Marks Remark

Total Question 22

Total Question 23

23 In a greengrocer's, cooking apples cost £2.65 per kg.

Mary buys 0.6 kg of cooking apples.

She also buys 0.4 kg of tomatoes.

At the checkout her bill for both items comes to £2.83

Work out the price **per kg** for the tomatoes.

Answer £ \_\_\_\_\_ [4]

[Turn over







**DO NOT WRITE ON THIS PAGE**

For Examiner's use only	
Question Number	Marks
1	
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<b>Total Marks</b>	
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Examiner Number

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