



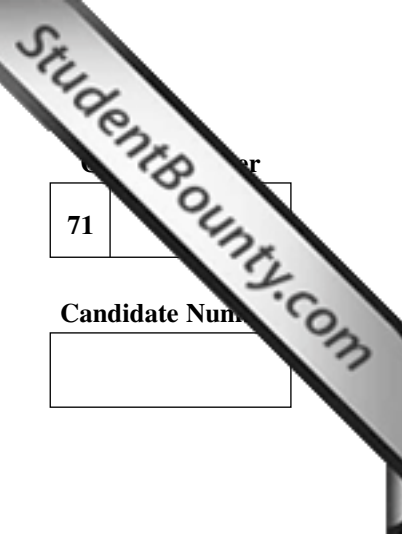
General Certificate of Secondary Education  
January 2010

## Mathematics



Module N5 Paper 2  
**(With calculator)**  
Foundation Tier  
[GMN52]

FRIDAY 15 JANUARY  
**10.45 am – 11.45 am**



71	
Candidate Number	
<input type="text"/>	

### TIME

1 hour.

### INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.  
Write your answers in the spaces provided in this question paper.  
Answer **all sixteen** questions.  
Any working should be clearly shown in the spaces provided since marks may be awarded for partially correct solutions.

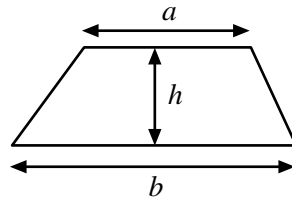
### INFORMATION FOR CANDIDATES

The total mark for this paper is 56.  
Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.  
You should have a calculator, ruler, compasses, set-square and protractor.  
The Formula Sheet is on page 2.

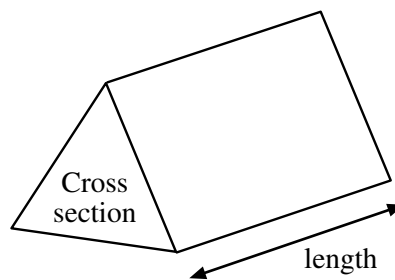
For Examiner's use only	
Question Number	Marks
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
<b>Total Marks</b>	

# Formula Sheet

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



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





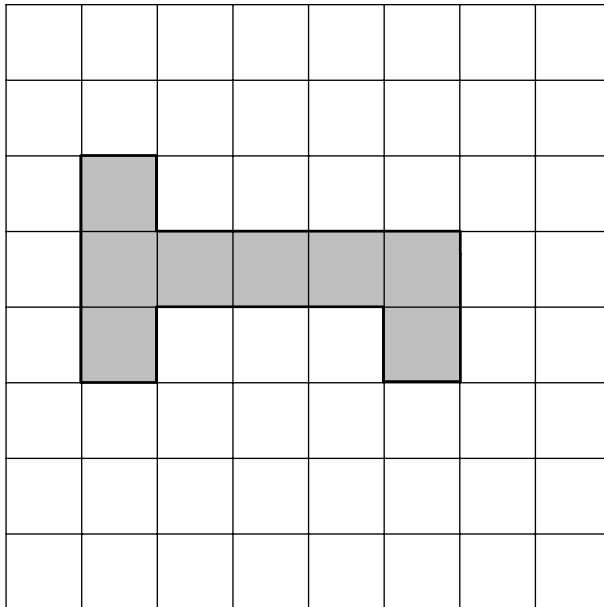








- 9 (a) Add one square to the following diagram so that the complete shape has rotational symmetry of order 2



[1]

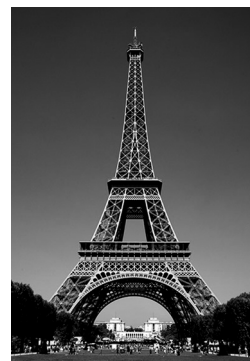
- (b) What six-sided shape has rotational symmetry of order 6?

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

- (c) Name two four-sided shapes with rotational symmetry of order 2

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

- 10 Jean buys £800 worth of euro at the rate of  $\text{€}1.234 = \text{£}1$  for a city break in Paris. She spends  $\frac{3}{4}$  of her euro and changes the rest at the rate of  $\text{€}1.323 = \text{£}1$ . How much should she receive? Give your answer to the nearest penny.



" Í 'y y 0: xky qpekku0qo lko i lr ct kuhxgt.3465u0ri

Answer £ \_\_\_\_\_ [3]

Examiner Only	
Marks	Remark





- 12 A box contains 6 red, 4 black and 10 blue pens.  
 A girl selects a pen at random.  
 What is the probability that the girl selects a black pen?

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

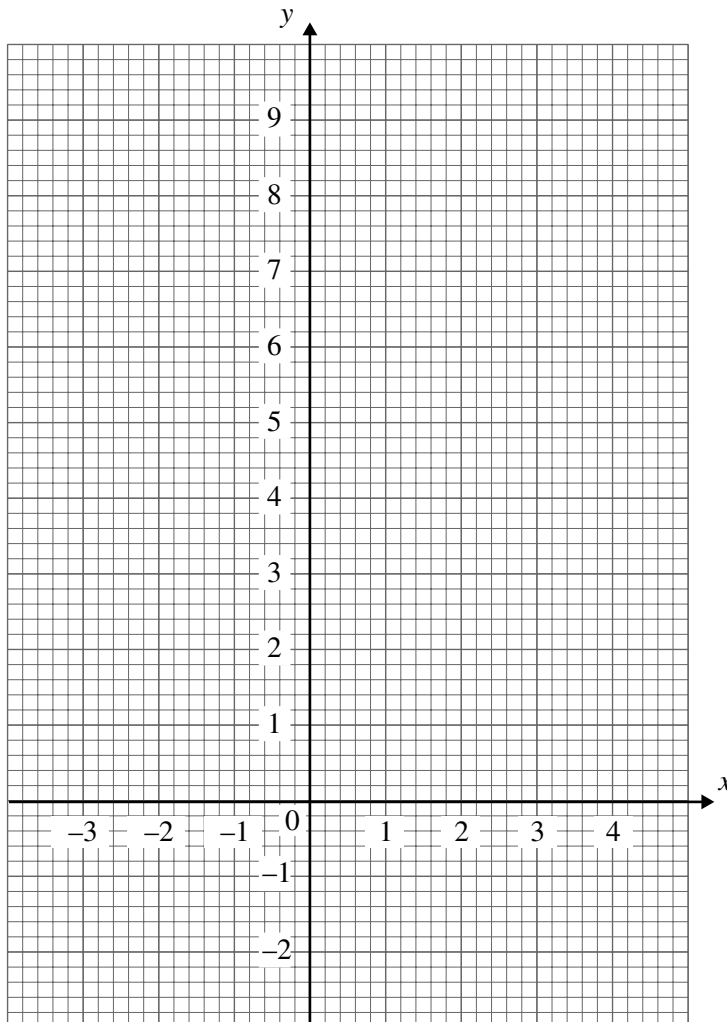
Examiner Only	
Marks	Remark

- 13 (a) Complete the table below for the curve  $y = x^2 - 1$

$x$	-2	-1	0	1	2	3
$y$	3		-1	0	3	8

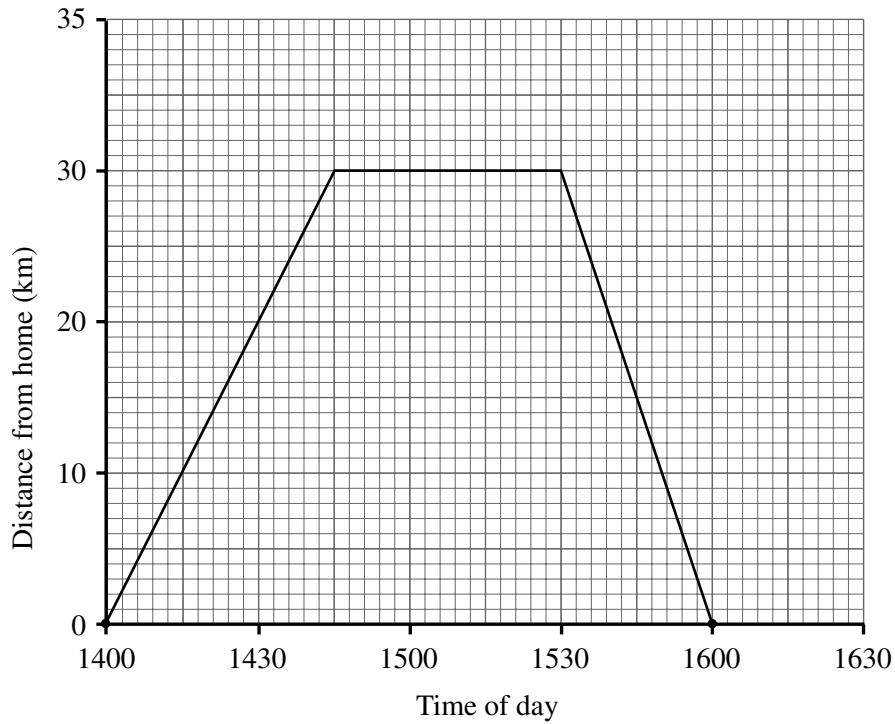
[1]

- (b) Hence draw the graph of  $y = x^2 - 1$  on the grid below.



[2]

- 14** Seamus drove from his home to the airport to collect his daughter. He waited for her to arrive and then he drove home. Here is a distance–time graph for his complete journey.



- (a)** For how many minutes did Seamus have to wait at the airport?

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

- (b)** Work out his average speed on his journey **to** the airport. Give your answer in kilometres per hour.

Answer \_\_\_\_\_ km/h [2]

Examiner Only	
Marks	Remark



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

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