



Rewarding Learning

General Certificate of Secondary Education
January 2011

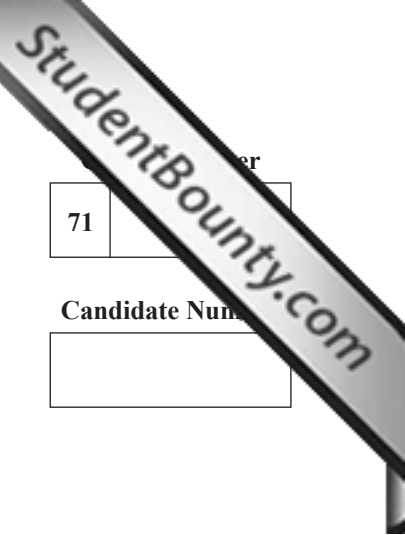
Mathematics

Module N5 Paper 1
(Non-calculator)
Foundation Tier

[GMN51]

FRIDAY 14 JANUARY

9.15 am – 10.15 am



71

Candidate Number

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 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 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 ruler, compasses, set-square and protractor.

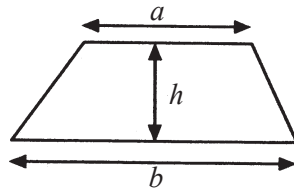
The Formula Sheet is on page 2.

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

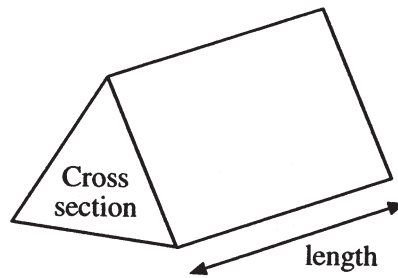


Formula Sheet

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



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



2 (a) In an examination hall the desks are arranged in rows.

Each row has 28 desks and there are 14 rows.

Estimate the number of desks in the examination hall.

Answer _____ desks [2]

(b) The memory card in a digital camera contains 112 pictures.

A photo booth charges 18p per print for photographs.

Estimate how much it would cost to print out all the pictures on the memory card.

Answer £ _____ [2]

(c) A shop is selling low-energy light bulbs for £2.89 each.

Estimate how many I can buy for £20

Answer _____ bulbs [2]

Examiner Only	
Marks	Remark

3 Choose from

Impossible	Certain	Likely	Unlikely	Evens
------------	---------	--------	----------	-------

to describe the probability of each of the following.

(a) An ordinary coin when tossed will show “heads”.

Answer _____ [1]

(b) Everyone in a class at school will have the same colour of hair.

Answer _____ [1]

(c) You will pick a black ball out of a bag only containing black balls.

Answer _____ [1]

(d) An ordinary dice will land on an 8.

Answer _____ [1]

4 (a) A factory makes golf trolleys. The number of wheels ordered is given by the formula.



Number of Wheels Ordered = Three \times Number of Trolleys + Ten

(i) How many wheels are ordered for 80 trolleys?

Answer _____ [2]

(ii) Why do you think 10 has been added in the formula?

Answer _____ [1]

(b) $B = 3D$

Find the value for B when $D = 3.5$

Answer B = _____ [1]

Examiner Only	
Marks	Remark

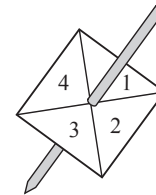
- 7 The table gives the names of some quadrilaterals and their symmetries. Complete the table.

Name of Quadrilateral	Number of Lines of Symmetry	Order of Rotational Symmetry
Square	4	4
_____	2	2
Parallelogram	_____	_____

[3]

Examiner Only	
Marks	Remark

- 8 Mary throws an ordinary dice and John spins a four-sided spinner with the digits 1, 2, 3 and 4



- (a) Complete the following table showing the **totals** of the scores from the dice and the spinner.

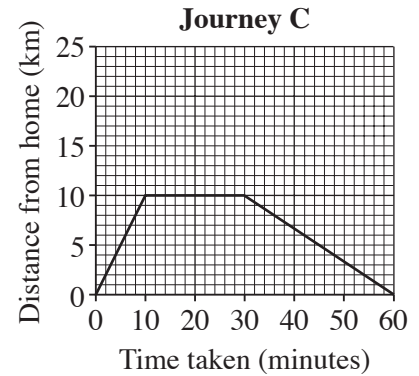
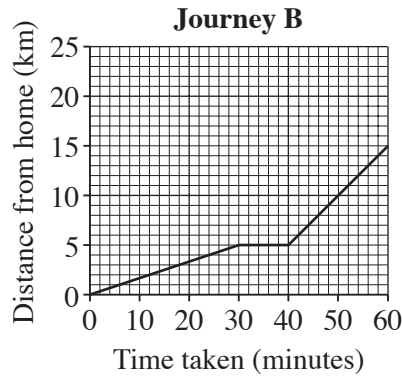
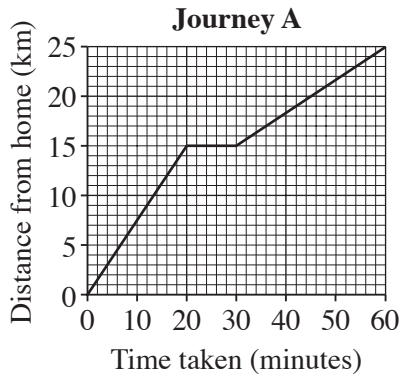
	DICE					
	1	2	3	4	5	6
1						
S						
P						
I	2					
N						
N	3					
E						
R						
4						

[2]

- (b) Calculate the probability of a total score that is less than 7

Answer _____ [2]

10 The graphs show 3 different journeys by bicycle.



(a) Which of the journeys has the longest stopping time?

Answer _____ [1]

(b) Which graph could describe the following journey?

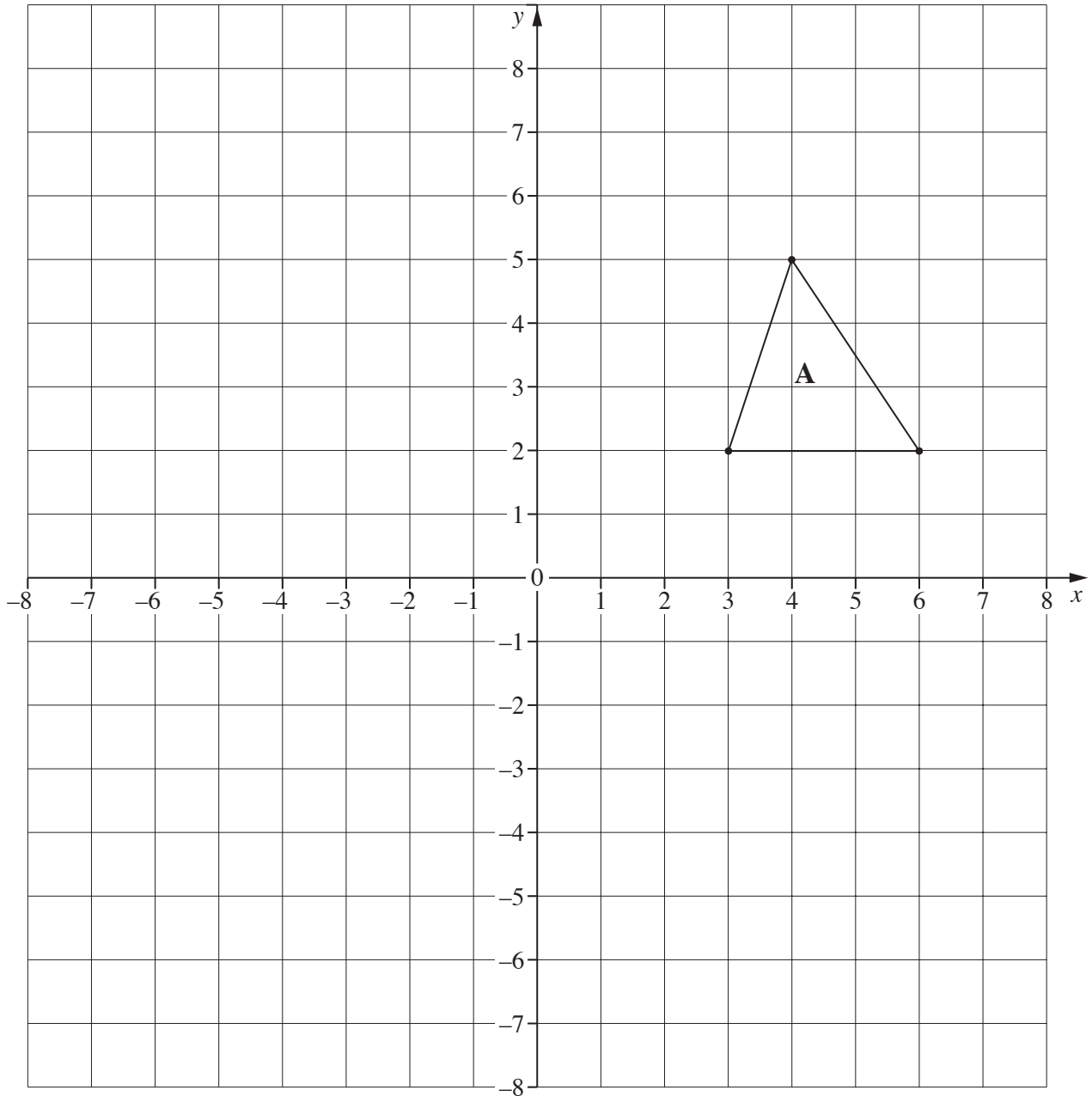
“Ryan cycles uphill. He then rests before continuing his journey downhill”.

Answer _____ [1]

(c) What is the average speed for the first part of **Journey B**?

Answer _____ km/h [2]

Examiner Only	
Marks	Remark



(a) Rotate triangle A 90° clockwise about (0, 2). Label the new triangle B.

[2]

(b) Draw the image of A under a translation of $\begin{pmatrix} -2 \\ 3 \end{pmatrix}$.
Label the new triangle C.

[2]

Examiner Only	
Marks	Remark

[Turn over

15 (a) Estimate the answer to $\frac{4.7 \times 20.1}{5.6 - 1.8}$

Answer _____ [2]

(b) Find the reciprocal of 2.2

Answer _____ [2]

THIS IS THE END OF THE QUESTION PAPER

Examiner Only	
Marks	Remark

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