

GENERAL CERTIFICATE OF SECONDARY EDUCATION
MATHEMATICS C (GRADUATED ASSESSMENT)
MODULE M1 – SECTION B
B271B

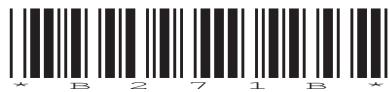
Candidates answer on the question paper.

OCR supplied materials:

None

Other materials required:

- Geometrical instruments
- Tracing paper (optional)
- Electronic calculator

Thursday 20 January 2011
Morning
Duration: 30 minutes

Candidate forename		Candidate surname	
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Centre number						Candidate number			
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INSTRUCTIONS TO CANDIDATES

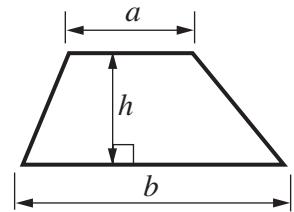
- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Show your working. Marks may be given for a correct method even if the answer is incorrect.
- Write your answer to each question in the space provided. Additional paper may be used if necessary but you must clearly show your candidate number, centre number and question number(s).
- Answer **all** the questions.
- Do **not** write in the bar codes.

INFORMATION FOR CANDIDATES

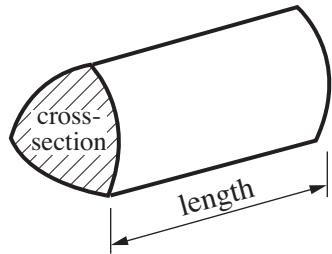
- The number of marks is given in brackets [] at the end of each question or part question.
- Section B starts with question 9.
- You are expected to use a calculator in Section B of this paper.
- The total number of marks for this Section is **25**.
- This document consists of **12** pages. Any blank pages are indicated.

Formulae Sheet

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



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



PLEASE DO NOT WRITE ON THIS PAGE

- 9 (a) Here is a number pattern.

1 3 5 7 9 11 13

What is the **special** name for numbers like this?

(a) [1]

- (b) Here is the start of a different number pattern.

2 6 10 14

What is the next number in this pattern?

(b) [1]

(c)

7 15 18 40 41 52

Pavan wants to write down a list of numbers that are divisible by 5.

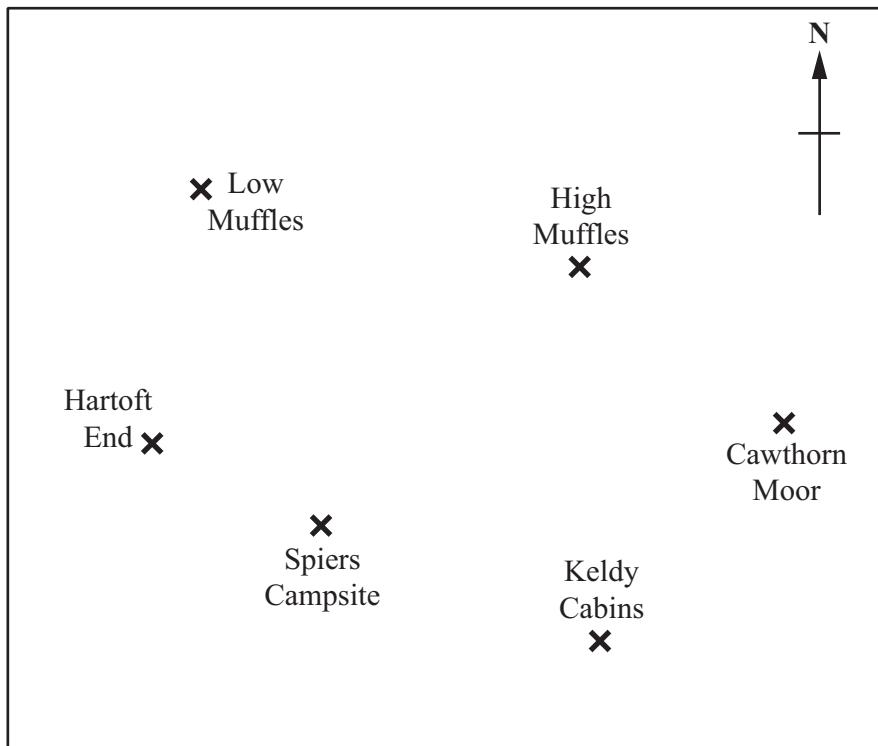
- (i) Write down **all** of the numbers from the box that should go in his list.

(c)(i) [1]

- (ii) Explain how you can tell if a number is divisible by 5.

..... [1]

- 10** Here are some places in Cropton Forest.



- (a)** Complete each sentence with the correct compass direction.

Cawthorn Moor is of Hartoft End.

Spiers Campsite is of High Muffles.

[2]

- (b)** Here are the prices for Spiers Campsite.

Prices per night	
Up to 2 people	£14.00
Extra adult	£ 5.50
Extra child	£ 3.00

Mr and Mrs Ross and their child stay at the campsite for 3 nights.

How much do they pay altogether?

(b) £ [3]

- (c) Ian walks from Keldy Cabins to High Muffles.
(i) His watch shows the time he starts the walk.



What time does he start the walk?

(c)(i) [1]

- (ii) Ian arrives at High Muffles at 3:15.

How long does Ian take to walk from Keldy Cabins to High Muffles?

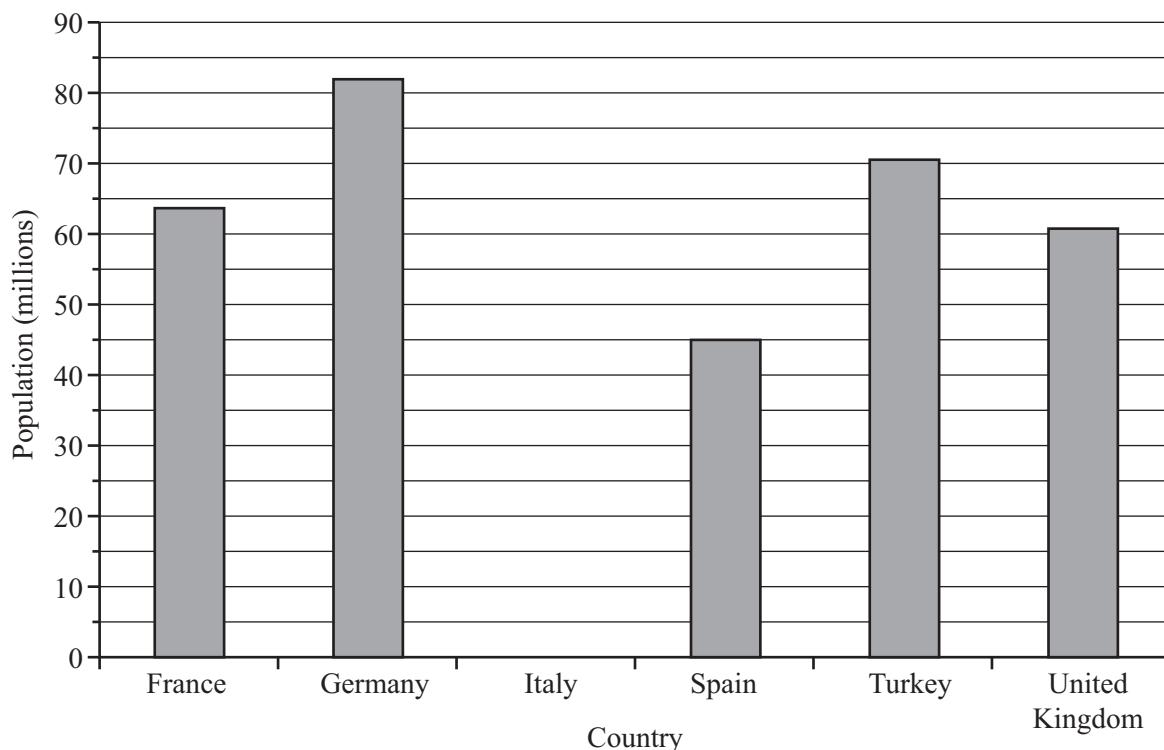
(ii) minutes [1]

- (d) Ian now walks from High Muffles to Cawthorn Moor.
He leaves High Muffles at 3:25.
It takes him 30 minutes to walk to Cawthorn Moor.

What time is it when he gets there?

(d) [1]

- 11 (a) This bar chart shows the populations of the largest countries in the European Union in 2008.



- (i) The population of Italy was 60 million.

Show this on the bar chart.

[1]

- (ii) Which of these countries had the largest population?

(a)(ii) [1]

- (iii) What was the population of Spain?

(iii) million [1]

- (iv) Complete.

The population of Turkey was million more than
the population of the United Kingdom.

[1]

- (b) One of the smallest countries in the European Union is Luxembourg.
The area of Luxembourg is 2586 square kilometres.

Write 2586 correct to the nearest hundred.

(b) [1]

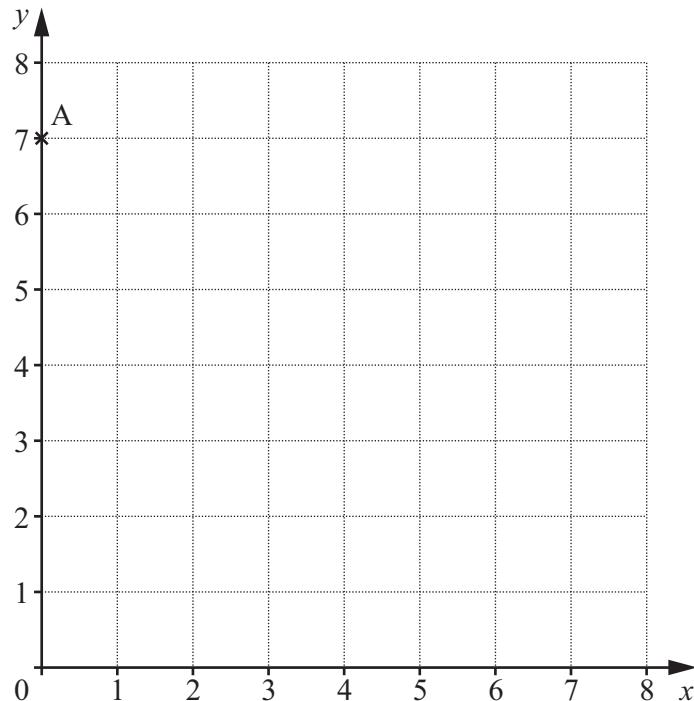
- (c) Here are the lengths, in kilometres, of some rivers in Europe.

Rhine 1320	Loire 1012	Volga 3692	Danube 2860	Elbe 1091
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Write the lengths in order, starting with the **longest**.

.....
longest

[2]

12

- (a) Write down the coordinates of point A.

(a) (.....,) [1]

- (b) Point B is at (6, 4).

Plot point B on the grid.

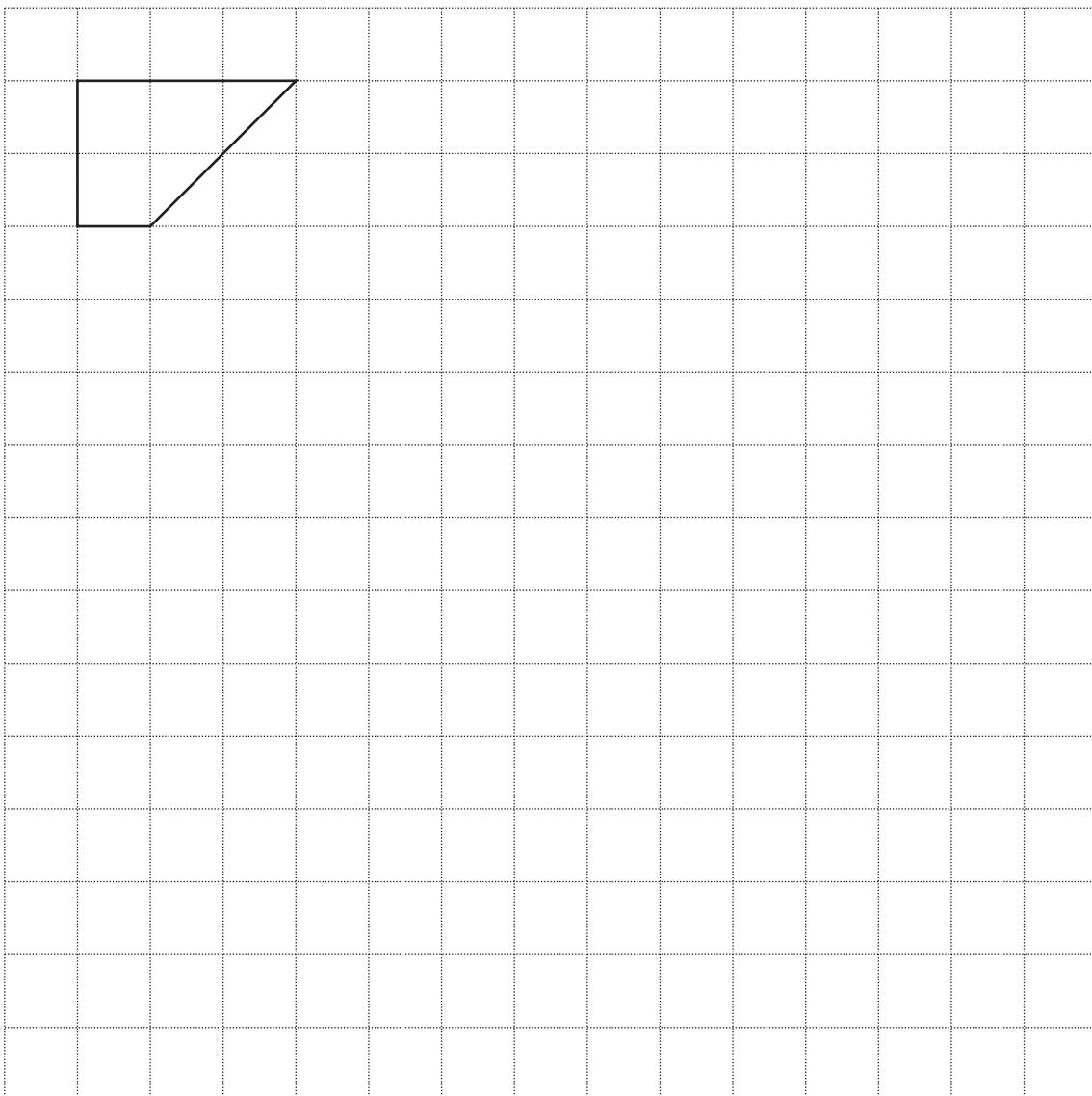
[1]

- (c) Join points A and B with a straight line.

Write down the coordinates of another point on this line.

(c) (.....,) [1]

- 13 Draw an enlargement of the shape below.
Make each line **three** times as long.



[3]

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