

Candidate forename		Candidate surname	
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Centre number						Candidate number				
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**OXFORD CAMBRIDGE AND RSA EXAMINATIONS
GENERAL CERTIFICATE OF SECONDARY EDUCATION**

B271B

**MATHEMATICS C
(GRADUATED ASSESSMENT)**

MODULE M1 (SECTION B)

THURSDAY 20 JANUARY 2011: Morning

DURATION: 30 minutes

SUITABLE FOR VISUALLY IMPAIRED CANDIDATES

Candidates answer on the question paper.

OCR SUPPLIED MATERIALS:

None

OTHER MATERIALS REQUIRED:

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

READ INSTRUCTIONS OVERLEAF

INSTRUCTIONS TO CANDIDATES

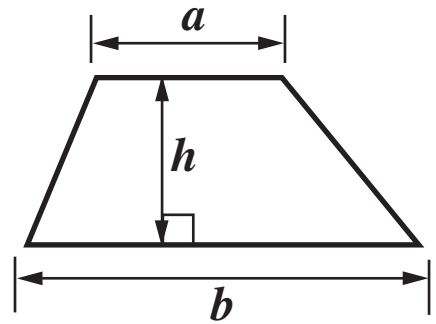
- **Write your name, centre number and candidate number in the boxes on the first page. Please write clearly and in capital letters.**
- **Use black ink. Pencil may be used for graphs and diagrams only.**
- **Read each question carefully. Make sure you know what you have to do before starting your answer.**
- **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.**

INFORMATION FOR CANDIDATES

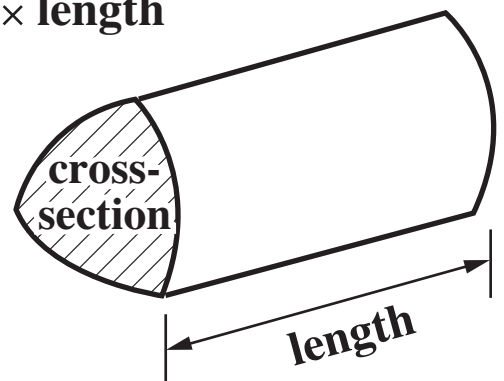
- **The number of marks is given in brackets [] at the end of each question or part question.**
- **Section B starts with question 9.**
- **You are expected to use a calculator in Section B of this paper.**
- **The total number of marks for this Section is 25.**

FORMULAE SHEET

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



Volume of prism = (area of cross-section) \times length



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.

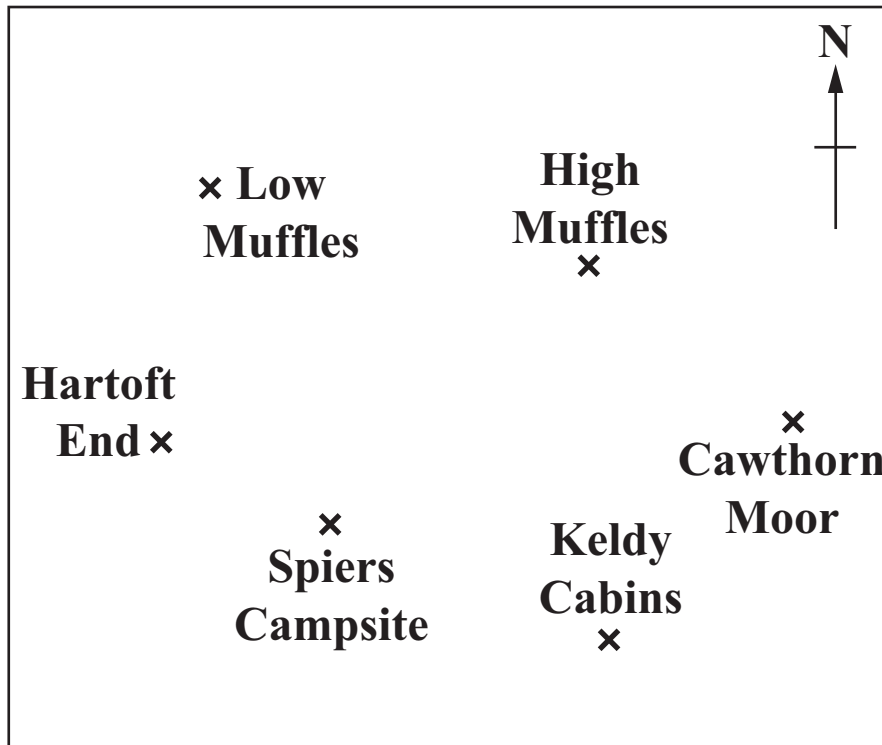
(i) Write down ALL of the numbers from the box that should go in his list.

(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

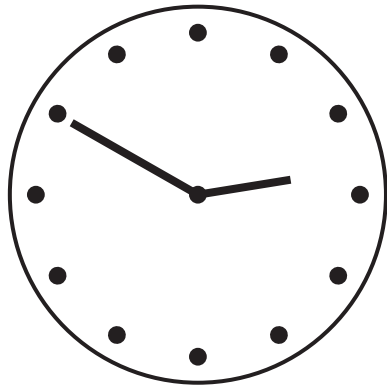
Mr and Mrs Ross and their child stay at the campsite for 3 nights.

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?

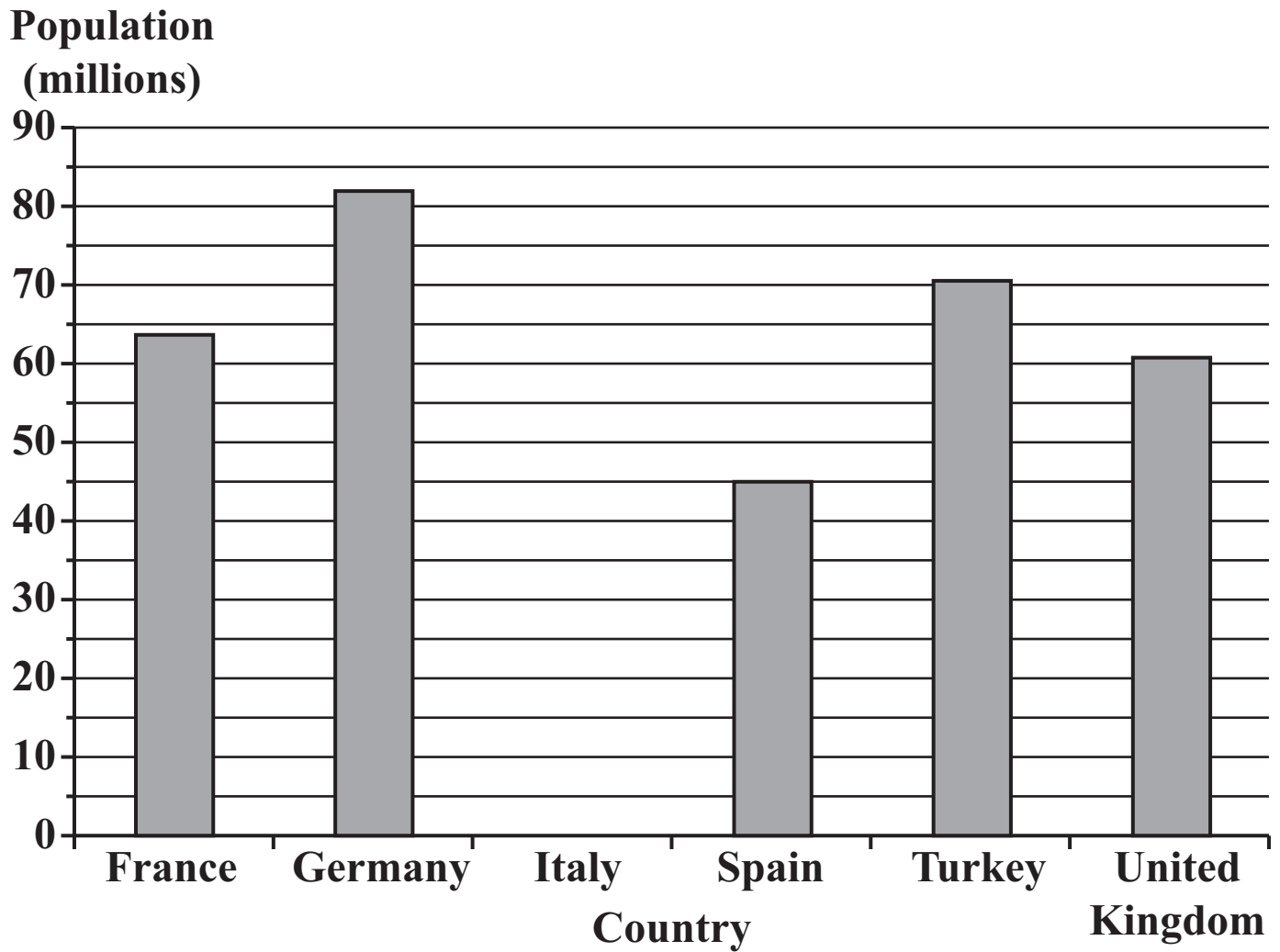
(ii) _____ minutes [1]

**(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

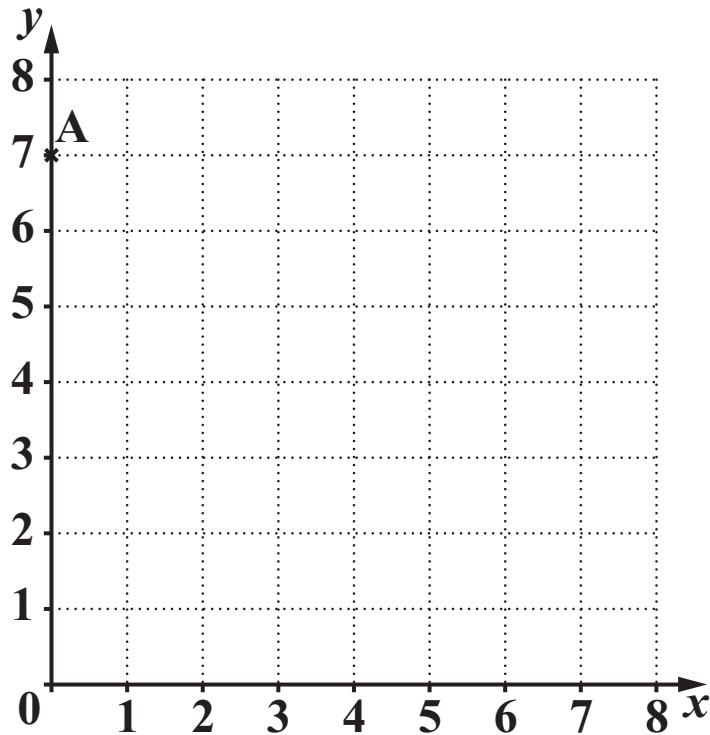
Danube
2860

Elbe
1091

Write the lengths in order, starting with the **LONGEST**.

_____ [2]
longest

12 Here is a coordinate grid.



(a) Write down the coordinates of point A.

(a) (_____ , _____) [1]

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

Plot point B on the grid. [1]

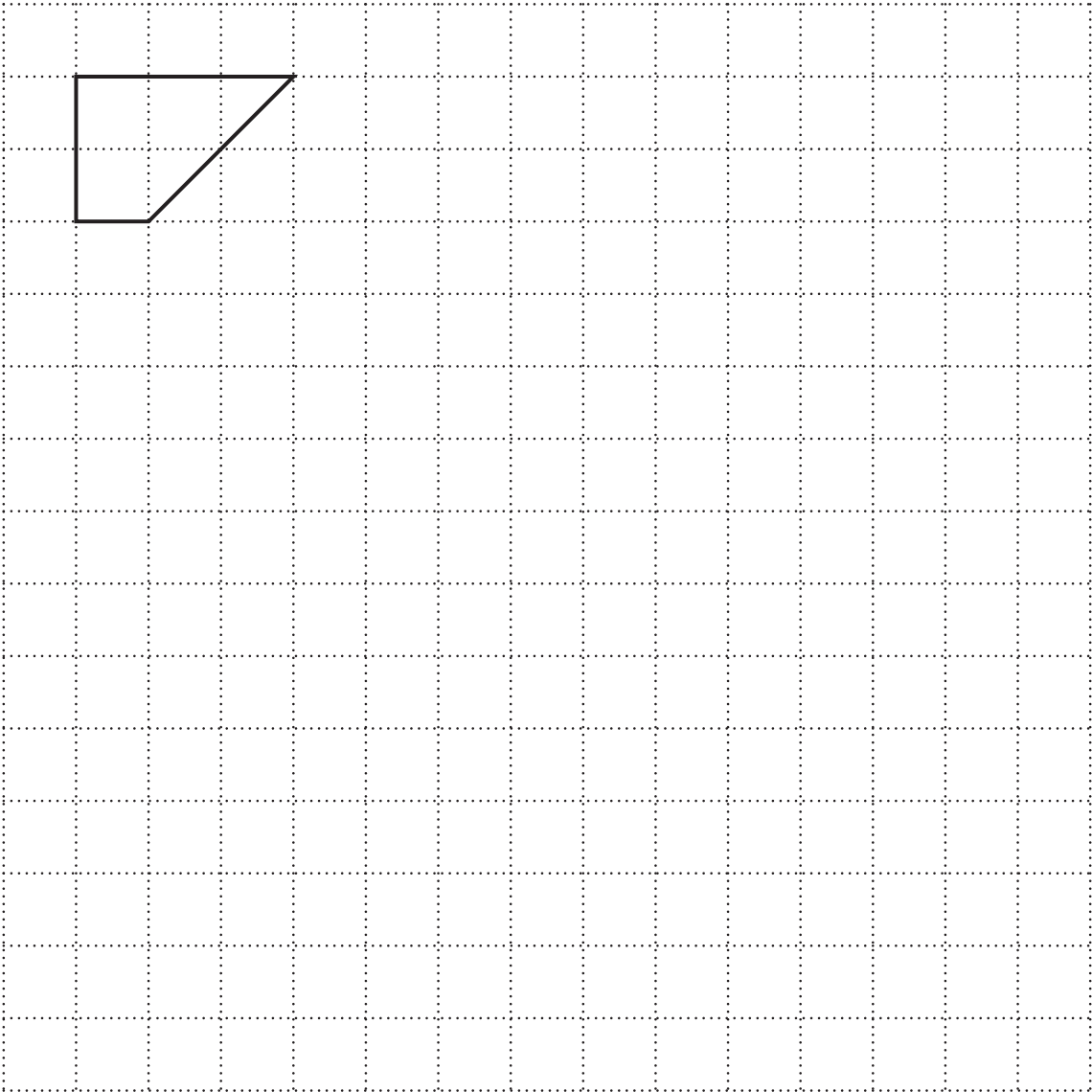
(c) Join points A and B with a straight line.

Write down the coordinates of another point on this line.

(c) (_____ , _____) [1]

TURN OVER FOR QUESTION 13.

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



[3]

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