M2

OCR
RECOGNISING ACHIEVEMENT

GENERAL CERTIFICATE OF SECONDARY EDUCATION
MATHEMATICS C (GRADUATED ASSESSMENT)
MODULE M2 – SECTION A

B272A

Candidates answer on the question paper

OCR Supplied Materials:
None

Other Materials Required:
* Geometrical instruments
* Tracing paper (optional)

Tuesday 23 June 2009
Morning

Duration: 30 minutes

B272A

Candidate Forename		Candidate Surname	

Centre Number					Candidate Number					

MODIFIED LANGUAGE

INSTRUCTIONS TO CANDIDATES

* Write your name clearly in capital letters, your Centre Number and Candidate Number in the boxes above.
* Use black ink. Pencil may be used for graphs and diagrams only.
* Read each question carefully and make sure that 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.
* Answer **all** the questions.
* Do **not** write in the bar codes.
* Write your answer to each question in the space provided, however additional paper may be used if necessary.

INFORMATION FOR CANDIDATES

* The number of marks is given in brackets **[ ]** at the end of each question or part question.
* The total number of marks for this Section is **25**.
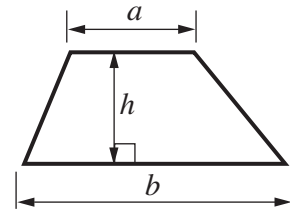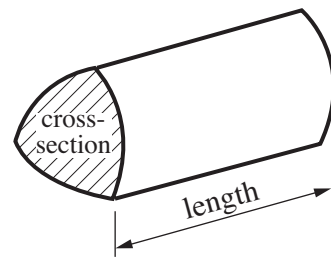* This document consists of **8** pages. Any blank pages are indicated.

WARNING

⊠ **No calculator can be used for Section A of this paper**

OCR is an exempt Charity

Turn over

Formulae Sheet

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

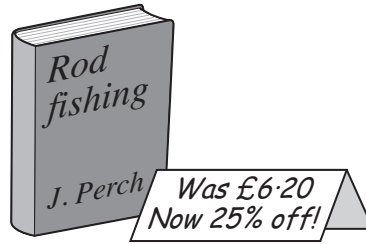**Volume of prism** = (area of cross-section) × length

PLEASE DO NOT WRITE ON THIS PAGE

1 Severn Supplies have a sale.

(a) Jamil buys this book in the sale.
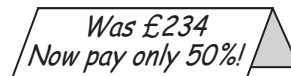
The book was £6·20.
Now there is 25% off.

Rod fishing

J. Perch

Was £6·20
Now 25% off!

(i) Work out 25% of £6·20.

(a)(i) £ ....[2]

(ii) How much does Jamil pay for the book in the sale?

(ii) £ ....[2]

(b) Five friends buy a fishing rod in the sale.
They share the cost equally.

The rod was £234.
Now it costs 50% of £234.

Was £234
Now pay only 50%!

Work out how much each friend must pay.

(b) £ ....[4]

Turn over

2   This table shows information about some pop stars.
    They have died, but their music still earns money.

Pop star	Estimated earnings in 2006	Date of birth		Age at death
Johnny Cash	£4·2 million	6 February	1932	71
Ray Charles	£5·3 million	23 September	1930	73
Kurt Cobain	£26·3 million	27 February	1967	27
George Harrison	£3·7 million	25 February	1943	58
John Lennon	£12·6 million	9 October	1940	40
Bob Marley	£3·7 million	6 February	1945	36
	million			42

(a)   Use this information to complete the last row of the table.

Elvis Presley was born on 8 January 1945 and died at age 42.
His music earned about £22·1 million in 2006.   **[1]**

(b)   Use the table to complete each sentence with names of pop stars.

.... was born in 1943.

.... died at age 73.

.... earned the most money in 2006.   **[3]**

(c)   Find the median of these ages.

        71   73   27   58   40   36   42

(c) ....**[2]**

(d) George Harrison and John Lennon were both in The Beatles.

   (i) How much did the music of the two of them earn **altogether** in 2006?

<div align="right">

(d)(i) £ ....million **[2]**
</div>

   (ii) How much **more** did John Lennon's music earn than George Harrison's music in 2006?

<div align="right">

(ii) £ ....million **[2]**
</div>

Turn over

3   This map shows the lowest ever January temperatures in some places.

N

Oban ⁻8°C

Edinburgh ⁻8°C

Belfast ⁻13°C

•York ⁻14°C

Aberystwyth ⁻11°C

•Birmingham ⁻12°C

Cardiff ⁻17°C

London ⁻10°C

Plymouth ⁻9°C
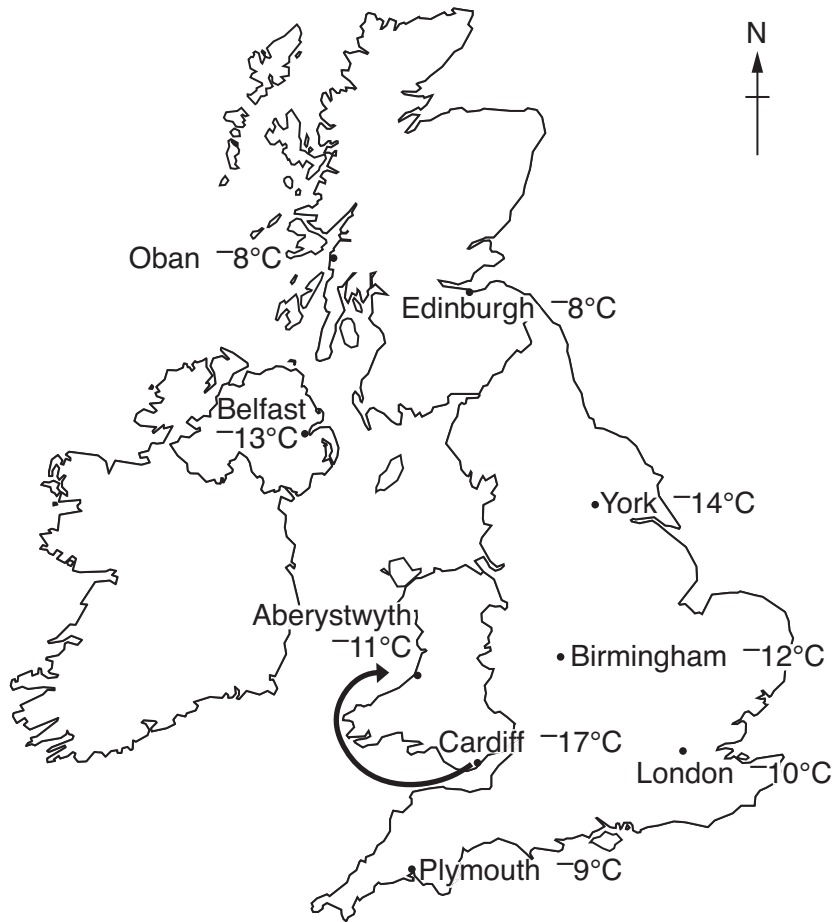
(a) Use information from the map to help you complete these sentences.

.... is due East of Cardiff.   **[1]**

The coldest of these temperatures is in ....   **[1]**

The lowest temperature in Oban is .... degrees warmer than the
lowest temperature in York.   **[2]**

(b) A storm moves around the coast from Cardiff to Aberystwyth.
The arrow shows the direction.

Is it moving clockwise or anticlockwise?
Put a ring around your answer.

clockwise   anticlockwise   **[1]**

(c) Steve uses weather records to make these statements.

> Cardiff will have 18 rainy days in January.
> Each rainy day will have 6 millimetres of rain.

How many millimetres of rain is this altogether?

(c) ....**[2]**

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