

Surname	Centre Number	Candidate Number
Other Names		0



GCSE

4351/01

MATHEMATICS (UNITISED SCHEME)

UNIT 1: Mathematics in Everyday Life

FOUNDATION TIER

A.M. MONDAY, 9 June 2014

1 hour 15 minutes

ADDITIONAL MATERIALS

A calculator will be required for this paper.

A ruler, a protractor and a pair of compasses may be required.

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen. Do not use gel pen or correction fluid.

Write your name, centre number and candidate number in the spaces at the top of this page.

Answer **all** the questions in the spaces provided.

If you run out of space, use the continuation page at the back of the booklet, taking care to number the question(s) correctly.

Take π as 3.14 or use the π button on your calculator.

INFORMATION FOR CANDIDATES

You should give details of your method of solution when appropriate.

Unless stated, diagrams are not drawn to scale.

Scale drawing solutions will not be acceptable where you are asked to calculate.

The number of marks is given in brackets at the end of each question or part-question.

You are reminded that assessment will take into account the quality of written communication (including mathematical communication) used in your answer to question 4.

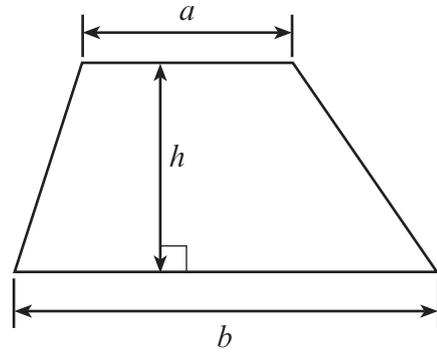
For Examiner's use only		
Question	Maximum Mark	Mark Awarded
1.	4	
2.	6	
3.	4	
4.	8	
5.	5	
6.	6	
7.	4	
8.	5	
9.	3	
10.	3	
11.	5	
12.	3	
13.	2	
14.	7	
Total	65	



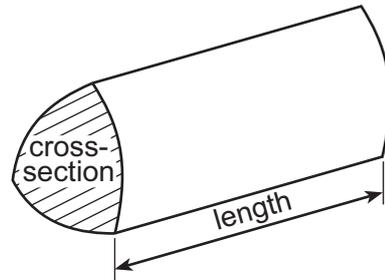
J U N 1 4 4 3 5 1 0 1 0 1

Formula List

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



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



1. A leaflet showed the population of various areas in Wales. It gave the information in words and in figures.

(a) Complete the entries for the following two places in words and figures. [2]

Anglesey

Sixty-nine thousand and twenty-five

Gwent

550 704

(b) How much greater was the population of Gwent than the population of Anglesey? Give your answer correct **to the nearest 1000**. [2]

To the nearest 1000:

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2. The number of pets in each house in a street was recorded.
A summary of the results is given below.

Number of pets	0	1	2	3	4
Frequency	6	8	5	2	1

- (a) On the diagram below draw a vertical line diagram to show this information. [4]

Frequency



Number of pets

- (b) Calculate the total number of pets in these houses. [2]

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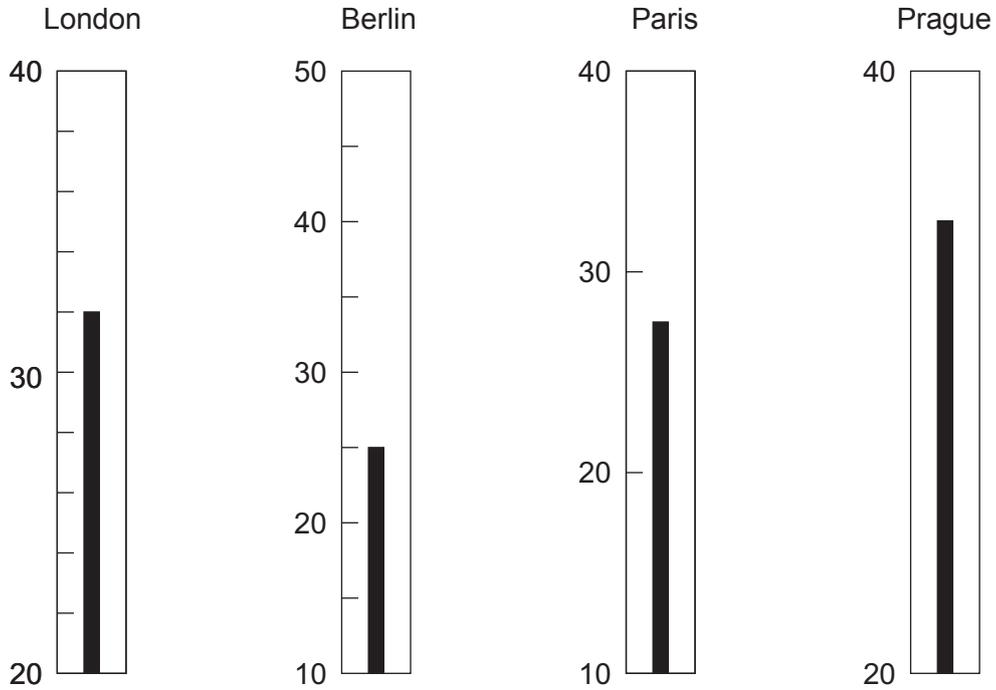
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3. Four pen-friends recorded the midday temperatures in the cities where they lived. The diagrams below show the readings given, in °C, on the thermometers they used. Some of the scale notches on two of the thermometers have worn off.



Complete the table below, listing the cities in order of temperature, starting with the coolest. Give the accurate temperatures for London and Berlin. Give an estimate for the temperatures in Paris and Prague. [4]

Space for notes

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Coolest → Warmest

City				
Temperature (°C)				



- (b) Another piece of land is also to be seeded.
It is rectangular and measures 15 metres by 11 metres.
If you bought the same amount of seed as in part (a), which **extra** box of seed would you need to buy in order to have just enough seed for this piece of land?
You must show all your working to support your answer. [2]

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- 5. A hedge-cutting firm uses the following formula to calculate how much they should charge customers.

$$\text{Charge} = \text{£}2 \text{ per } 10 \text{ metre length} + \text{cost of fuel}$$

- (a) How much would the firm charge a farmer for cutting 640 metres of hedge when the cost of the fuel used was £12? [2]

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- (b) A town council was charged £205 to cut the hedges in the local park.
The cost of the fuel used was £15.
How many metres of hedge were cut? [3]

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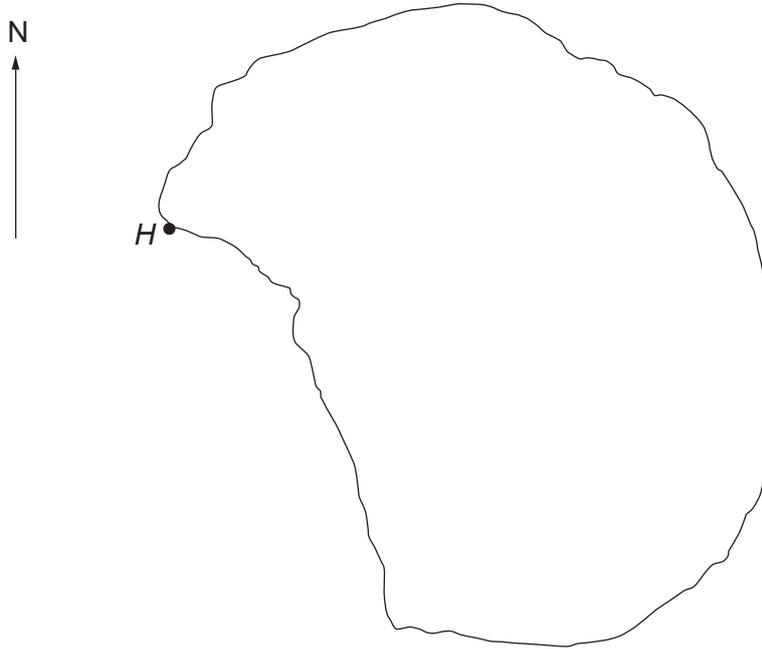
6. A Youth Hostel (*H*) is situated on the shore of a lake as shown below.

Two points, *A* and *B*, are also on the shore of the lake.
Both points are 150 metres from *H*, and *A* is further north than *B*.

(a) (i) Using a scale of,

1 cm represents 25 metres,

clearly mark with dots (•) the position of point *A* and the position of point *B*. [2]



(ii) What is the actual distance between point *A* and point *B* straight across the lake? [2]

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(b) Steve rows in a straight line from *H* to point *A*.
At point *A* he turns and rows in a straight line from point *A* to point *B*.

Use your protractor to measure the obtuse angle he turns through at point *A*. [2]

Obtuse angle turned through =°



7. A group of 17 children and 5 adults paid a total of £103 for tickets to see a show.
Each adult's ticket cost £7.
How much did each child's ticket cost?

[4]

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9. A concrete base is to be laid for a garage.
The base must measure 5.5 metres long, 3.8 metres wide and have a depth of 12 centimetres.

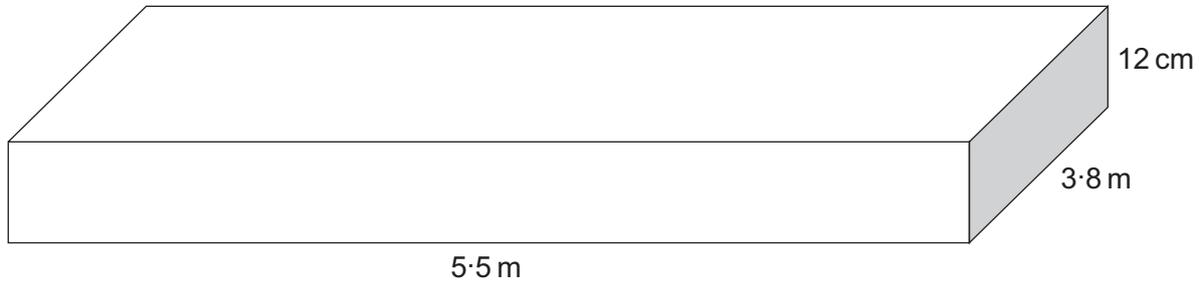


Diagram not drawn to scale

What will be the volume of this concrete base in **cubic metres** (m^3)?

[3]

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10. The diagram shows the positions of two ships *A* and *B*.
Ship *A* and ship *B* both receive a distress call at the same time.
Ship *A* locates the call on a bearing of 135° .
Ship *B* locates the call on a bearing of 215° .

On the diagram below show the position from where the distress call was sent.

[3]



12. Martha wants to test the following hypothesis.

'More men than women buy a daily newspaper.'

She plans to

- hand out a short questionnaire at a Women's Institute meeting,
- ask the following questions in the questionnaire,

(i) How old are you?

(ii) How often do you buy a newspaper?
Never 1-3 times 3-5 times More than 5 times

- collect their replies at the next meeting.

Write down **three** unfavourable comments about this plan.

[3]

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2.
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3.
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