

GENERAL CERTIFICATE OF SECONDARY EDUCATION
MATHEMATICS C (GRADUATED ASSESSMENT)
MODULE M5 – SECTION B

B275B

Candidates answer on the question paper

OCR Supplied Materials:
None

Other Materials Required:

- Geometrical instruments
- Tracing paper (optional)
- Pie chart scale (optional)
- Electronic calculator

Tuesday 20 January 2009
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 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.

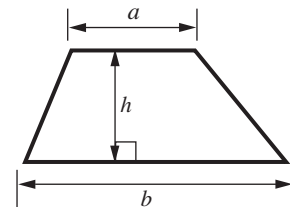
INFORMATION FOR CANDIDATES

- The number of marks is given in brackets [] at the end of each question or part question.
- 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 **8** pages. Any blank pages are indicated.

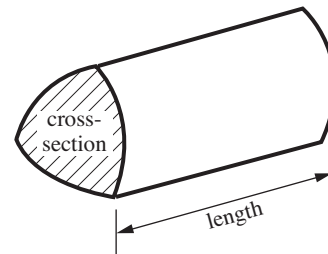
FOR EXAMINER'S USE	
SECTION B	

Formulae Sheet

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



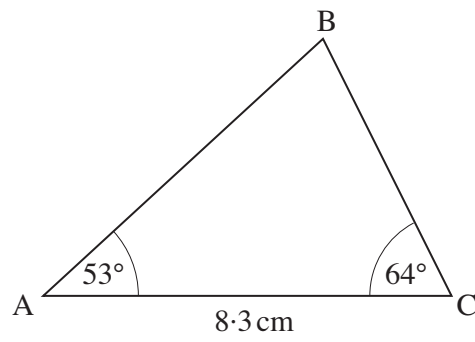
Volume of prism = (area of cross-section) \times length



PLEASE DO NOT WRITE ON THIS PAGE

3

9 This is a sketch of triangle ABC.

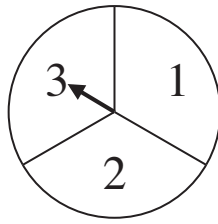


Not to scale

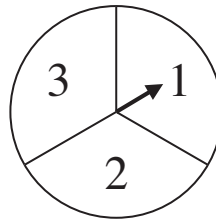
Construct the triangle full size.

[3]

10 A game is played using these two fair spinners.



1st spinner



2nd spinner

The picture shows the scores 3 and 1.

(a) List all the possible pairs of scores.

The scores shown in the picture have been done for you.

You may not need to use all the lines.

1 st spinner	2 nd spinner
3	1

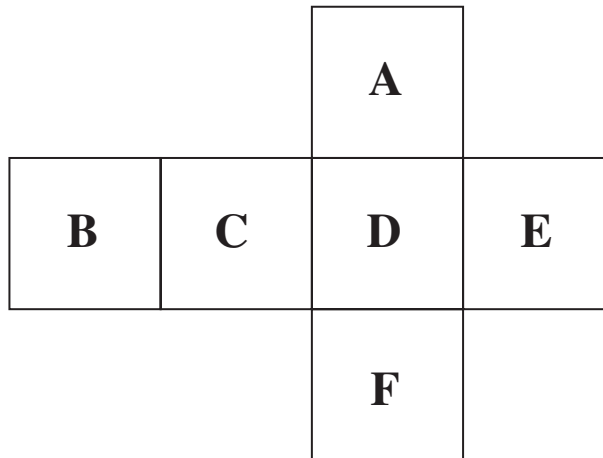
[2]

(b) The two scores are added together to give a total.

What is the probability of getting a **total** of 3?

(b) [2]

- 11 This diagram shows the net of a cube.
The faces are labelled.



- (a) The net is folded to make a cube.

(i) Which face is opposite face **D**?

(a)(i) [1]

(ii) How many edges has the cube?

(ii) [1]

- (b) Each edge of another cube is 4 cm long.

Work out the volume of this cube.

Give the units of your answer.

(b) [2]

- 12 Jenny has worked out the mean and range of the heights of students at Fawcett School. She records her results in a table.

	Boys	Girls
Mean	167.4 cm	168.4 cm
Range	42 cm	35 cm

Jenny then writes some statements about her results.

For each statement, decide whether

- it is true,
- it is false,
- there is not enough information to make a decision.

For each statement, put a tick in the correct column.

Statement	True	False	Not enough information
On average the girls are taller than the boys.			
There are more boys than girls.			
The tallest boy is taller than the tallest girl.			
The boys' heights are less spread out than the girls' heights.			

[2]

- 13 The price of a DVD recorder is £180. In a sale the price is reduced by 35%.

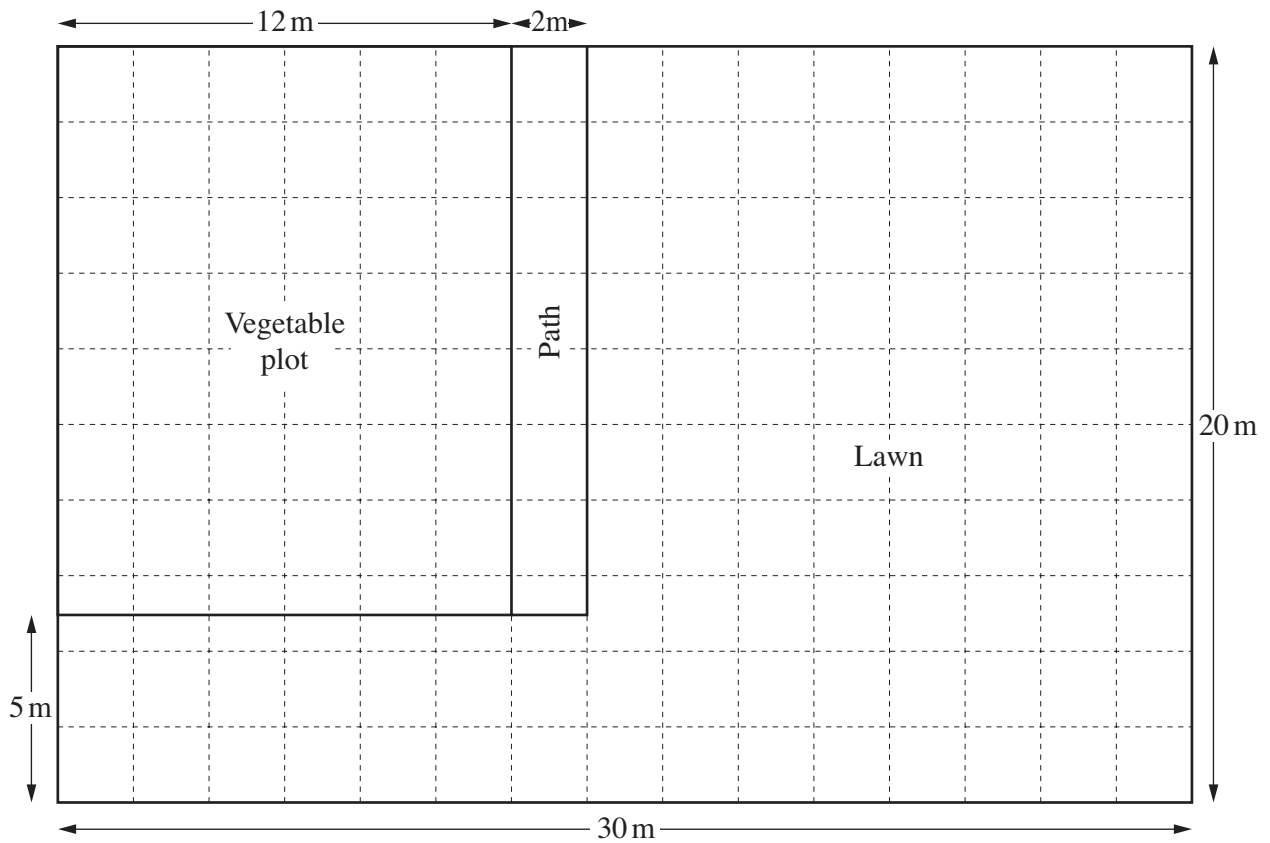
(a) Work out 35% of £180.

(a) £ [2]

(b) Work out the sale price of the DVD recorder.

(b) £ [1]

14 Chris made this scale drawing of his garden.



(a) What scale did he use for the drawing?

(a) 1 cm to [1]

(b) Work out the area of the real vegetable plot.

(b) m² [2]

(c) What percentage of the whole garden is used for the vegetable plot?

(c) % [3]

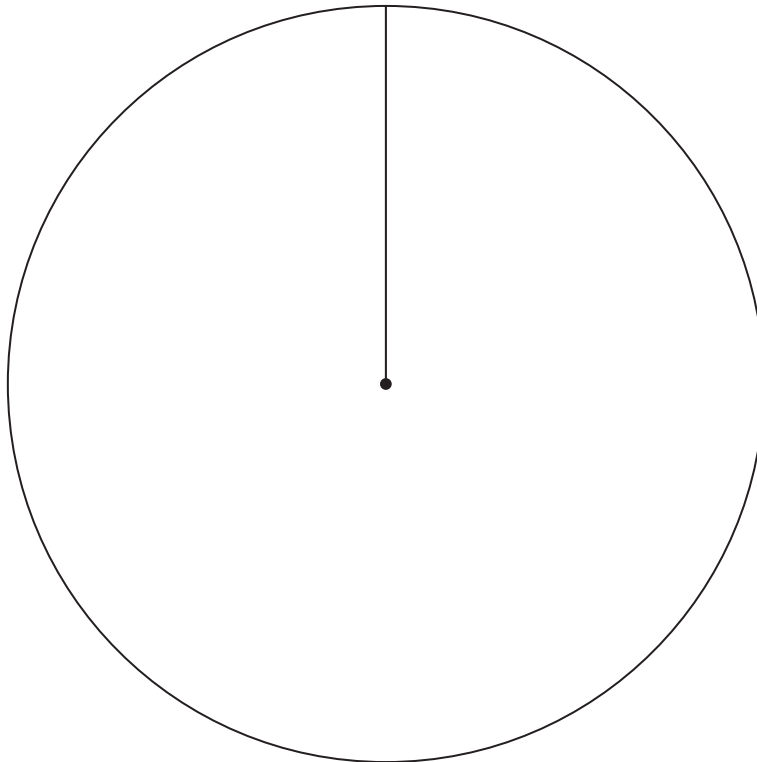
TURN OVER FOR QUESTION 15

- 15 A researcher asked 60 people returning from a cruise whether they would go on a cruise next year.

This table summarises their responses.

Response	Number of people
Yes	15
Possibly	35
No	10

Draw a pie chart to represent these responses.



[3]