

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**

B272B

**MATHEMATICS C
(GRADUATED ASSESSMENT)**

MODULE M2 (SECTION B)

TUESDAY 21 JUNE 2011: Afternoon

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

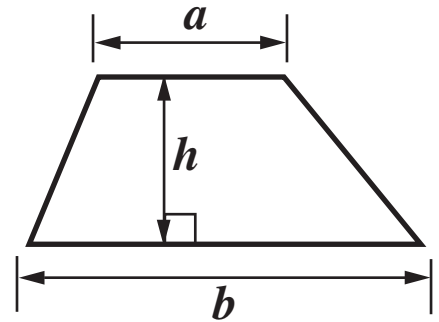
- **Write your name, centre number and candidate number in the boxes on the first page. Please write clearly and in capital letters.**
- **Use black ink. Pencil may be used for graphs and diagrams only.**
- **Read each question carefully. Make sure you know what you have to do before starting your answer.**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

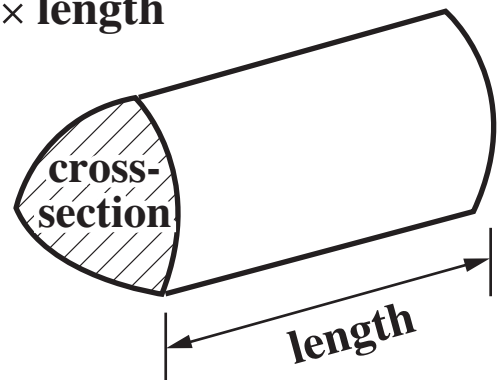
- **The number of marks is given in brackets [] at the end of each question or part question.**
- **Section B starts with question 8.**
- **You are expected to use a calculator in Section B of this paper.**
- **The total number of marks for this Section is 25.**

Formulae Sheet

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

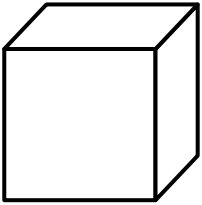


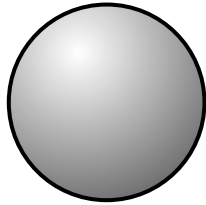
$$\text{Volume of prism} = (\text{area of cross-section}) \times \text{length}$$

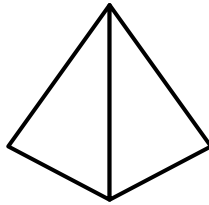


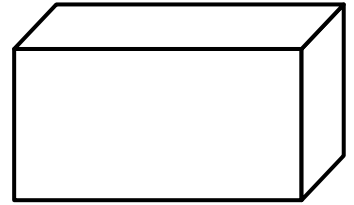
8 Choose the correct name for each of these solids from the list.

Cone Cuboid Cylinder Pyramid Cube Sphere









[3]

9 Joe's Car Hire uses this formula to work out the cost, in pounds, of hiring a car.

- **Multiply the number of days for which the car is hired by 18**
- **Then add 25**

How much does it cost to hire a car for 6 days?

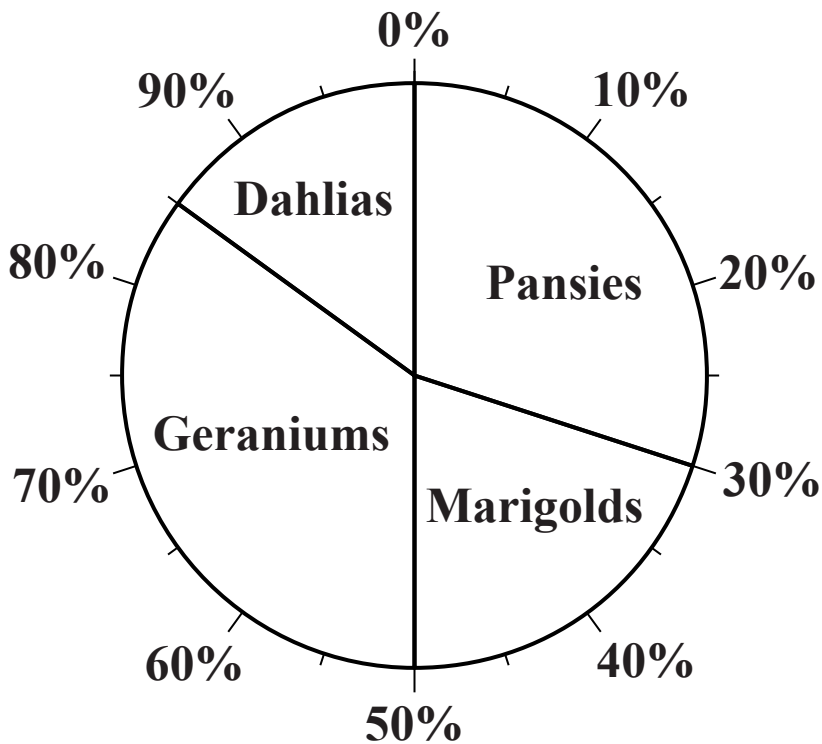
£ _____ [2]

- 10 (a) Lizzie buys 172 plants.
She puts her plants into trays.
Each tray holds 12 plants.**

How many trays does Lizzie need?

(a) _____ [2]

- (b) This pie chart shows the types of plants Lizzie buys.**



- (i) What percentage of the plants are Pansies?**

(b)(i) _____ % [1]

(ii) Sally thinks 85% of the plants are Geraniums.

Explain why Sally is wrong.

[1]

**(c) Lizzie spends £108 at the garden centre.
Her Mum pays 25% of the bill.**

How much does her Mum pay?

(c) £ _____ [1]

(d) James buys 9 bean plants.

These are the heights of the bean plants, in centimetres.

15 18 22 15 21 16 15 11 16

For these plants,

(i) find the median,

(d)(i) _____ cm [2]

(ii) find the mode.

(ii) _____ cm [1]

(e) Alec buys $1\frac{1}{2}$ kg of fertilizer.

Change $1\frac{1}{2}$ kg into grams.

(e) _____ g [1]

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- 11 This table shows the tram fares for adults between places in Westland.

	Station		University		Cathedral		Market Street		Portland Road	
	£1.50									
	£0.70	£0.95								
	£1.80	£1.20	£1.70							
	£0.60	£0.80	£0.70	£1.10						

- (a) What is the tram fare from the University to Portland Road?

(a) £ _____ [1]

- (b) Mrs Raul travels from the Station to the Cathedral. Later she travels from the Cathedral to Market Street.

How much does she pay altogether?

(b) £ _____ [2]

**(c) A child fare is 50% of the adult fare.
Mr and Mrs Smith and their child travel from
Market Street to the Station.**

How much is their total fare?

(c) £ _____ [3]

12 This table shows the minimum temperature for 7 cities one day in January.

CITY	MINIMUM TEMPERATURE (°C)
Beijing	-10
Lima	22
London	5
Moscow	-12
Oslo	-4
Stockholm	-3
Sydney	18

(a) Write these temperatures in order, starting with the coldest.

_____ [2]
coldest

(b) How much warmer was Sydney than Oslo?

(b) _____ °C [1]

- (c) The maximum temperature in Moscow that day was 5°C warmer than the minimum.**

What was the maximum temperature in Moscow that day?

(c) _____ $^{\circ}\text{C}$ [1]

TURN OVER FOR QUESTION 13

13 This line represents 10 kilometres on a map.



Estimate the number of kilometres that the line below represents on the same map.



_____ km [1]

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