

**GENERAL CERTIFICATE OF SECONDARY EDUCATION
MATHEMATICS C**

B272/B

MODULE M2 – SECTION B

SPECIMEN

Candidates answer on the question paper.

Time: 30 minutes

Additional Materials:

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



Candidate
Name

Centre
Number

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Candidate
Number

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INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above.
- Answer **all** the questions.
- Use blue or black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure you know what you have to do before starting your answer.
- In many questions marks will be given for a correct method even if the answer is incorrect.
- Do **not** write in the bar code.
- Do **not** write outside the box bordering each page.
- WRITE YOUR ANSWER TO EACH QUESTION IN THE SPACE PROVIDED. ANSWERS WRITTEN ELSEWHERE WILL NOT BE MARKED.

INFORMATION FOR CANDIDATES

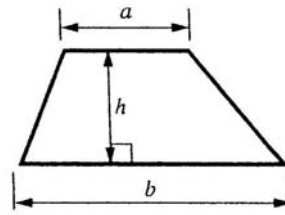
- You are expected to use a calculator in Section B of this paper.
- The number of marks is given in brackets [] at the end of each question or part question.
- The total number of marks for this section is 25.
- Section B starts with Question 9.

For Examiner's Use	
Section B	

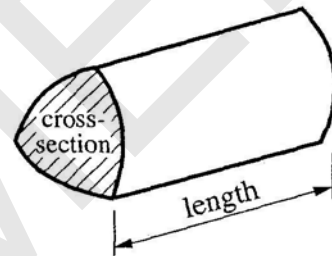
This document consists of **8** printed pages.

2
FORMULAE SHEET

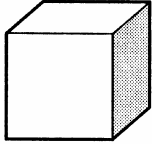
Area of trapezium = $\frac{1}{2}(a+b)h$



Volume of prism = (area of cross-section) x length



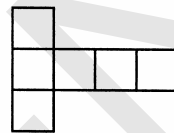
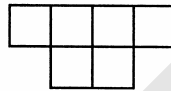
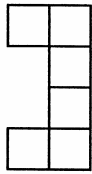
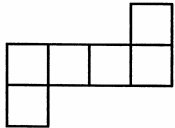
9



(a) Write down the name of this solid.

(a) _____ [1]

(b) Which of these could be a net for this solid?



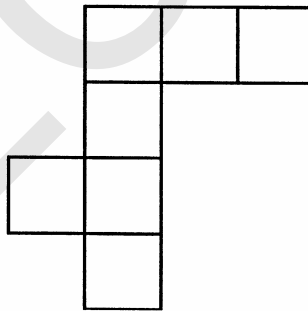
Write
yes or no

.....

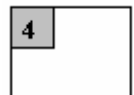
[2]

(c) The diagram below is **not** a net for this solid.
It has an extra square.

Put a cross (**X**) in that square.



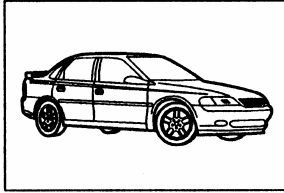
[1]



[Turn over

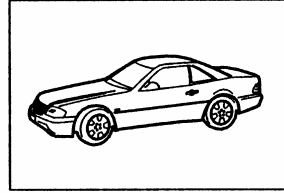
- 10 Simon needs to hire a car for seven days.
He gets the costs from two companies.

Cars 'R' Us



Cost =
number of days \times £16
then add £42

Nick's Cars



Cost =
number of days \times £18
then add £24

- (a) Work out the cost of hiring a car from *Cars 'R' Us* for 7 days.

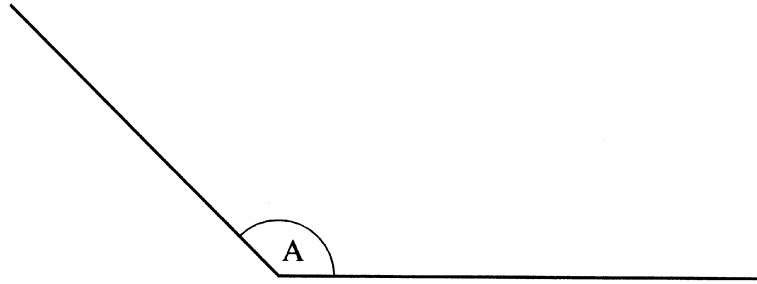
(a) £ _____ [2]

- (b) Which company is cheaper for seven days, and by how much?

(b) _____
is cheaper by
£ _____ [3]

5	
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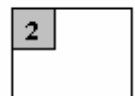
11 (a) Measure angle A.



(a) _____ ° [1]

(b) Draw a reflex angle in the space below.
Label the angle B.

[1]



[Turn over

- 12 (a) Martin recorded the temperatures, in degrees Celsius, each morning. Here are his results for five days.

Monday	Tuesday	Wednesday	Thursday	Friday
2	- 4	- 1	3	0

Write these temperatures in order, **lowest** first.

..... [2]
lowest

- (b) The temperature at 6 am on Tuesday was -4°C .

By 11 am it had gone up by 5 degrees.

What was the temperature at 11 am?

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

3	
---	--

- 13 (a) (i)** Jim works in a garden centre at weekends.
In April he was paid £228.

He gave his mother 25% of this.

Work out 25% of £228.

(a)(i) £ _____ [2]

- (ii)** In May he worked for six days.
He was paid the same amount each day.
He was paid £171 altogether.

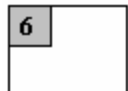
How much was he paid each day?

(ii) £ _____ [2]

- (b)** In a sale each plant costs £3.25.
Alan buys 17 plants.

Work out the total cost.

(b) £ [2]



[Turn over

14 These are the ages of the members of a running club.

19 22 31 31 17 35 25 21 19 31 24

(a) Write down the modal age.

(a) _____ [1]

(b) Work out the median age.

(b) _____ [2]

(c) A new member joins the club.

The modal age does not change, but the median age goes down to 23.

Write down a possible age for the new member of the club.

(c) [2]

Section B Total [25]

5

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The maximum mark for this paper is 25.

SPECIMEN

9	(a)	Cube	1	W1	accept cuboid for 3 correct (blanks = N)
	(b)	YNNY	2		
	(c)	Top right-most corner	1		
	4				
10	(a)	$16 \times 7 + 42$ 154	M1 A1	W2 W1 SC2 SC1	or W2 for 150 ft <i>their</i> two costs or $18 \times 7 + 24$ Nick's and 112 406 and 294
	(b)	Nick's Cars 4	3		
	5				
	5				
11	(a)	133 – 137	1		
	(b)	Reflex angle drawn with correct angle labelled B	1		
	2				
12	(a)	- 4 - 1 0 2 3	2		1 for correct first and last
	(b)	1	1		
	3				
13	(a)(i)	attempt at $228 \div 4$ 57	M1 A1		Figs '57' or W2 Implied by figs 285 or W2 Allowing adding, implied by figs '5525' or W2
	(ii)	attempt $171 \div 6$ 28.50	M1 A1		
	(b)	attempt at 3.25×17 55.25	M1 A1		
	6				
	6				
	6				
14	(a)	31	1	W1	For ordered list, condone 1 error or omission 19
	(b)	24	2		
	(c)	Any age of 22 or less, not 19	2	W1	
	5				

Section B Total 25

Assessment Objectives Grid

Question	AO2	AO3	AO4	Total
9		4		4
10	5			5
11		2		2
12	3			3
13	6			6
14			5	5
Totals	14	6	5	25

SPECIMEN