

**GENERAL CERTIFICATE OF SECONDARY EDUCATION**  
**MATHEMATICS C**  
MODULE M5 – SECTION B

**B275/B**

**SPECIMEN**

Candidates answer on the question paper.

Time: 30 minutes

Additional Materials:

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



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**

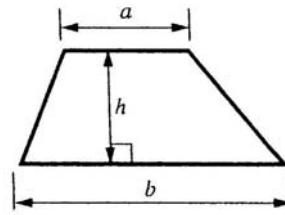
- You are expected to use a calculator in Section B of this paper.
- The number of marks is given in brackets [ ] at the end of each question or part question.
- The total number of marks for this section is 25.
- Section B starts with Question 8.

For Examiner's Use	
Section B	

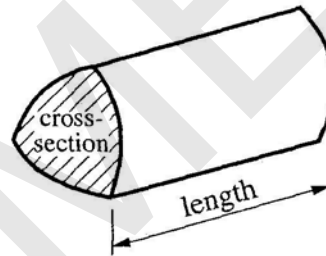
This document consists of **9** printed pages and **3** blank pages.

2  
FORMULAE SHEET

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



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



8 Bhavana tests two varieties of strawberry plants,  $X$  and  $Y$ .

(a) Here are the numbers of strawberries picked from each plant of variety  $Y$ .

12 12 14 15 16 17 17 18 19 21

Find the mean number of strawberries.

(a) \_\_\_\_\_ [3]

(b) Bhavana produces this table.

	Mean	Range
Variety $X$	14.2	14
Variety $Y$		9

Which variety of strawberry plant would you recommend?

Explain your answer.

Variety \_\_\_\_\_ because \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_ [1]

4

[Turn over

9 Solve.

(a)  $2x = 15$

(a) \_\_\_\_\_ [1]

(b)  $15 = 6 + x$

(b) \_\_\_\_\_ [1]

(c)  $4x - 7 = 13$

(c) \_\_\_\_\_ [2]

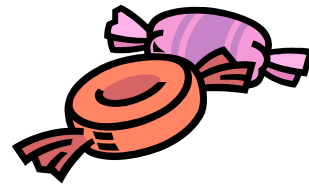
4	
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10 (a) A jar contains 240 sweets.  
35% of the sweets are orange.

$\frac{3}{8}$  of the sweets are lemon.

The rest are blackcurrant.

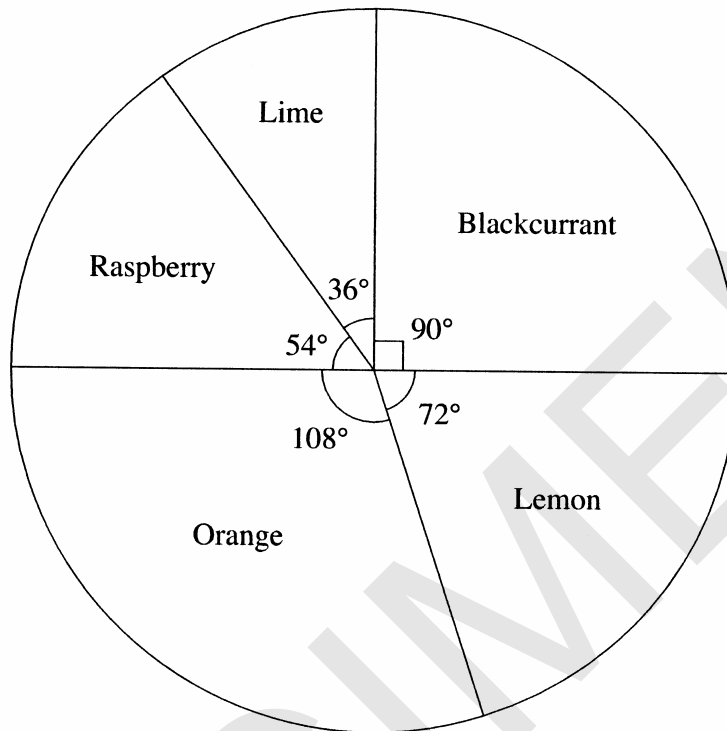
How many blackcurrant sweets are in the jar?



(a) \_\_\_\_\_ [5]

10 (b) Teresa buys a bag of sweets.

This pie chart shows the different sweets in her bag.



(i) What fraction of the sweets is blackcurrant?

(b)(i) \_\_\_\_\_ [1]

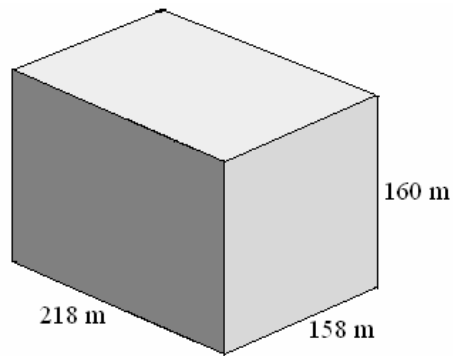
(ii) There are 4 lime sweets in the bag.  
How many sweets are there in the bag altogether?

(ii) \_\_\_\_\_ [2]

8	
---	--

[Turn over

- 11 This vehicle assembly building is one of the largest buildings in the world. It is in the shape of a cuboid.



Calculate the volume of the vehicle assembly building.  
Give the units of your answer.

[3]

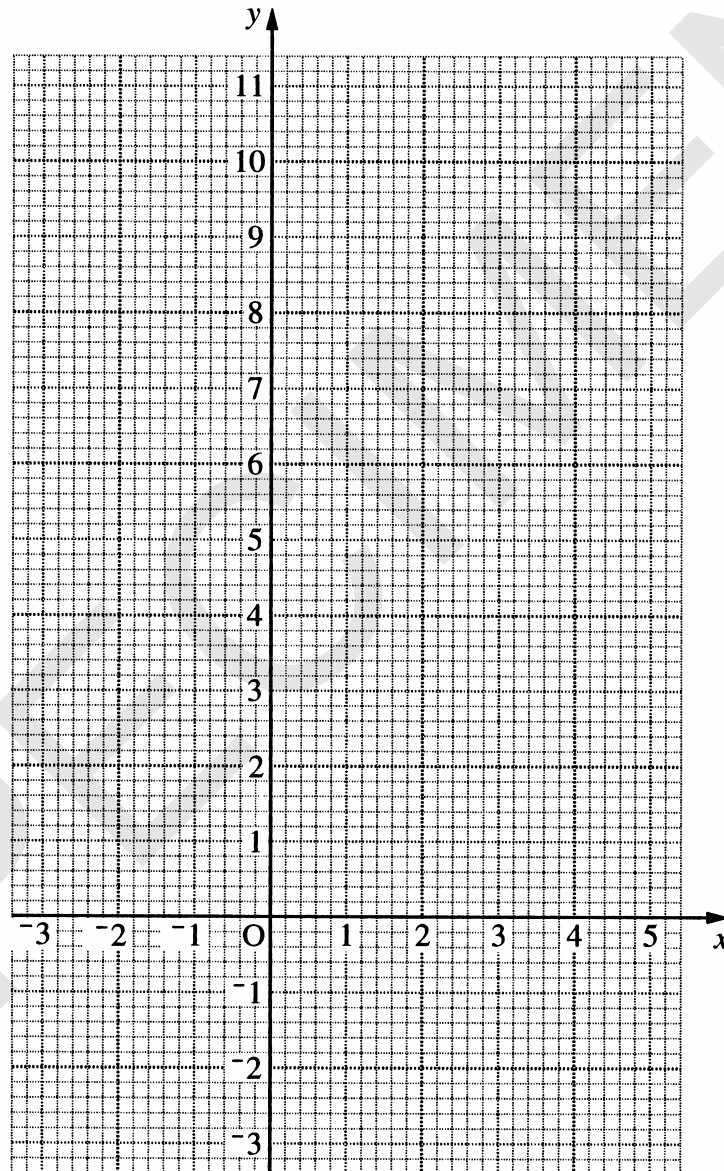
3

12 (a) Complete the table of values for  $y = 2x + 1$ .

$x$	2	3	4	5
$y$	5	.....	.....	.....

[1]

(b) On the axis below draw the graph of  $y = 2x + 1$ .



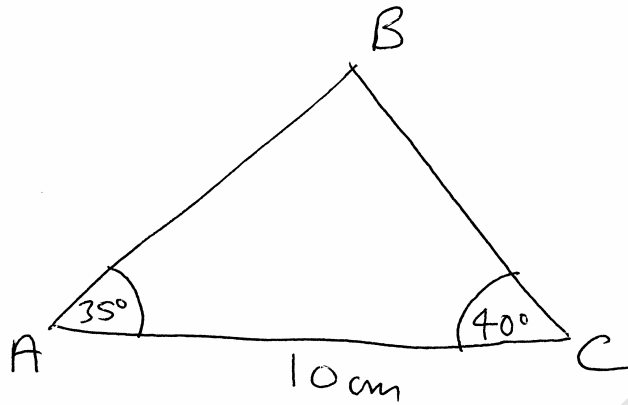
[2]

3	
---	--

[Turn over]

13

Not drawn  
accurately



The rough sketch shows triangle ABC.

Construct and label triangle ABC in the space below

[3]

3	
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Section B Total [25]



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SPECIMEN

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The maximum mark for this paper is 25.

**SPECIMEN**

8	(a)	16.1	W3	M1	Attempt to add, may be implied by 150 to 170 seen
	(b)	Y, more strawberries per plant	W1 4	M1	<i>Their</i> total $\div$ 10 f.t. <i>their</i> mean
9	(a)	7.5 o.e.	W1		Accept embedded answers throughout
	(b)	9	W1		
	(c)	5	W2 4	M1	$4x - 7 + 7 = 13 + 7$ o.e.
10	(a)	66	W5	M1 A1 M1 A1 W1	0.35 x 240 (o.e.) 84 soi attempt at $3 \div 8$ (x 240) (o.e.) 90 240 – ‘ <i>their</i> 84 and 90’ <b>if 0 scored then SC1</b> for 72.5(%) o.e. <b>or SC2</b> for 27.5(%) o.e.
	(b)(i)	$\frac{1}{4}$ o.e.	W1		
	(ii)	40	W2 8	M1	$4 \times 10$ (o.e.) <i>or</i> $36 \div 4$ (=9) <i>or</i> <b>M1</b> for 2 of: raspberry 6, blackcurrant 10, orange 12 and lemon 8
11		5511040 <i>or</i> 55(11040) $m^3$	2 1 3	M1	for 218 x 158 x 160

12	(a) (b)	7, 9, 11 at least 3 points from table plotted correctly ruled straight line	W1 W1 W1 3		ft their values  correct line only
13		1 each for correct length and correct angles within 2 mm and 2°	W3  3	SC2	for correctly sized diagram (use tracing) but unlabelled

**Section B Total 25**

SPECIMEN

**Assessment Objectives Grid**

<b>Question</b>	<b>AO2</b>	<b>AO3</b>	<b>AO4</b>	<b>Total</b>
<b>8</b>			<b>4</b>	<b>4</b>
<b>9</b>	<b>4</b>			<b>4</b>
<b>10</b>	<b>5</b>		<b>3</b>	<b>8</b>
<b>11</b>		<b>3</b>		<b>3</b>
<b>12</b>	<b>3</b>			<b>3</b>
<b>13</b>		<b>3</b>		<b>3</b>
<b>Totals</b>	<b>12</b>	<b>6</b>	<b>7</b>	<b>25</b>