

**Education Bureau**  
**Territory-wide System Assessment 2018**  
**Secondary 3 Mathematics**  
**Marking Scheme**

Note (for Section B and C of each sub-paper):

\*Mark for Answer:

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- (2) If the work shown is incorrect, the Mark for Answer will not be given.
- (3) If the work shown is poorly presented but there is a correct answer, the Mark for Answer may be given.

\*\*Mark for Presentation:

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- (4) The Mark for Presentation may include overall work such as mathematical expressions, units, written explanations, use of symbols, etc.

r.t.  $xxx$  means “accept answers which can be rounded to  $xxx$ ” .

Steps that may be skipped are shown in **shade**.

Alternative suggested answers are shown in **boxes**.

## Section A – Sub-paper 1 (9ME1) (1 mark each)

1. B (9ME2-1)
2. B
3. D
4. D (9ME4-12)
5. B (9ME4-10)
6. B (9ME2-6)
7. A
8. A (9ME4-6)
9. D (9ME4-7)
10. C
11. B
12. C (9ME2-12)
13. A
14. C (9ME4-14)
15. A (9ME2-15)
16. A
17. D
18. C
19. C (9ME2-19)
20. D (9ME4-20)

## Section B – Sub-paper 1 (9ME1)

Question Number	Suggested Answers	Marks	Notes
21.	$A = 2/+2$ $B = 4/+4$ $C = -3$	1	Must be all correct
22.	Thickness = $9.3 \times 10^{-4}$ cm	1	
23.	The width of the desk is <u>72</u> cm.	1	
24. (9ME2-24)	$s = \underline{68}$	1	
25. (9ME2-25)	The value of the 5 <sup>th</sup> term of the sequence is <u>17</u> .	1	
26.	$7x + 5$	1	
27.	$(x+7)(x-7)$	1	
28. (9ME4-28)	$x = \underline{-15}$	1	
29. (9ME2-29)	approximate solution	1	
30.	$x > -3$	1	
31.	The radius of the circle is <u>17</u> cm.	1	
32.	The order of rotational symmetry is <u>4</u> .	1	
33.	(a) $x = \underline{8}$ (b) $y = \underline{12}$	1	Must be all correct No need to consider unit
34.	$x = \underline{128^\circ}$	1	No need to consider unit
35.(9ME2-35)	A, C	1	Must be all correct
36.	The coordinates of $D'$ are ( <u>1</u> , <u>2</u> ).	1	Must be all correct
37.	(i) Discrete data (ii) Continuous data	1	Must be all correct
38. (9ME2-38)	(a) The value of $x$ is <u>110</u> . (b) The total expenditure of the birthday party is \$ <u>4320</u> . (c) The difference between the expenditures spent on food and drinks is \$ <u>360</u> .	1* (38a) 1* (38b) 1* (38c)	No need to consider unit
39. (9ME4-39)	Mean = <u>6</u> Median = <u>7</u>	1 (39-1) 1 (39-2)	

## Section C – Sub-paper 1 (9ME1)

Question Number	Suggested Answers	Marks	Notes
40. (9ME4-40)	The interest = $3750 \times 2\% \times 3$ = \$225	1 (40-1) 1* (40-2) 1** (40-3)	
41.	The present value of the earrings = $8\,000 \times (1 + 5\%)^3$ = 9261 $\therefore$ The present value of the earrings is \$9261.  OR  $8000 \times 1.05 = 8400$ $8400 \times 1.05 = 8820$ $8820 \times 1.05 = 9261$ $\therefore$ The present value of the earrings is \$9261.	1 (41-1) 1* (41-2) 1** (41-3)  $1$ (41-1)  $1^*$ (41-2) $1^{**}$ (41-3)	$\text{Correct method (multiply 1.05 three times)}$
42. (9ME2-43)	$\begin{cases} 3x + 5y = 31 & \dots(1) \\ 3x - 5y = 11 & \dots(2) \end{cases}$ $(1) - (2)$ $10y = 20$  $y = 2$ Substitute $y = 2$ into (1)  $3x + 5(2) = 31$  $x = 7$	1 (42-1)  1* (42-2)  1 (42-3)  1* (42-4)	Correct method (eliminating one of the variables) Correct value of $y$ (or $x$ )  Correct method  Both values are correct
43. (9ME2-42)	$x + 2x + 105^\circ = 180^\circ$ $x = 25^\circ$	1 (43-1)  1* (43-2)	No need to consider unit



Question Number	Suggested Answers	Marks	Notes
47.	<p>In these 20 matches the football team participated, only 8 of the results are “Win”. Therefore, it is not true that more than half of the results are “Win”.</p> <p style="text-align: center;">OR</p>	0 0	<ul style="list-style-type: none"> <li>◆ Without any reasonable explanation</li> <li>◆ Conclusion is incorrect</li> </ul>
	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <p>In these 20 matches the football team participated, 12 of the results are “draw” or “lose”. Therefore, it is not true that more than half of the results are “Win”.</p> </div> <p style="text-align: center;">OR</p> <div style="border: 1px solid black; padding: 5px;"> <p>The mode of a set of data is the datum with the highest frequency, but it does not imply that the number of appearances of the datum must be more than half of the total.</p> </div>	1 0	<ul style="list-style-type: none"> <li>◆ Explanation is reasonable but incomplete</li> <li>◆ Explanation is reasonable but no conclusion is drawn</li> </ul>
	<p>∴ I <b>disagree</b> with the captain’s claim.</p>	1 1	<ul style="list-style-type: none"> <li>◆ Explanation is reasonable and the conclusion is correct</li> </ul>

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Steps that may be skipped are shown in **shade**.

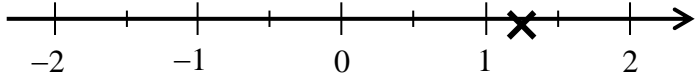
Alternative suggested answers are shown in **boxes**.

## Section A – Sub-paper 2 (9ME2) (1 mark each)

1. B (9ME1-1)
2. A
3. A (9ME3-3)
4. B
5. C
6. B (9ME1-6)
7. D (9ME3-7)
8. A
9. B (9ME3-9)
10. C
11. C (9ME3-11)
12. C (9ME1-12)
13. D
14. D (9ME3-14)
15. A (9ME1-15)
16. D
17. B (9ME3-17)
18. D
19. C (9ME1-19)
20. A (9ME3-20)



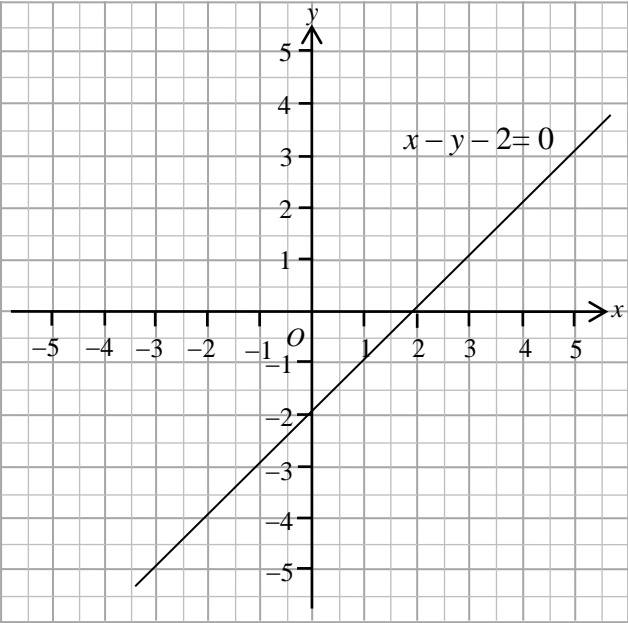
## Section B – Sub-paper 2 (9ME2)

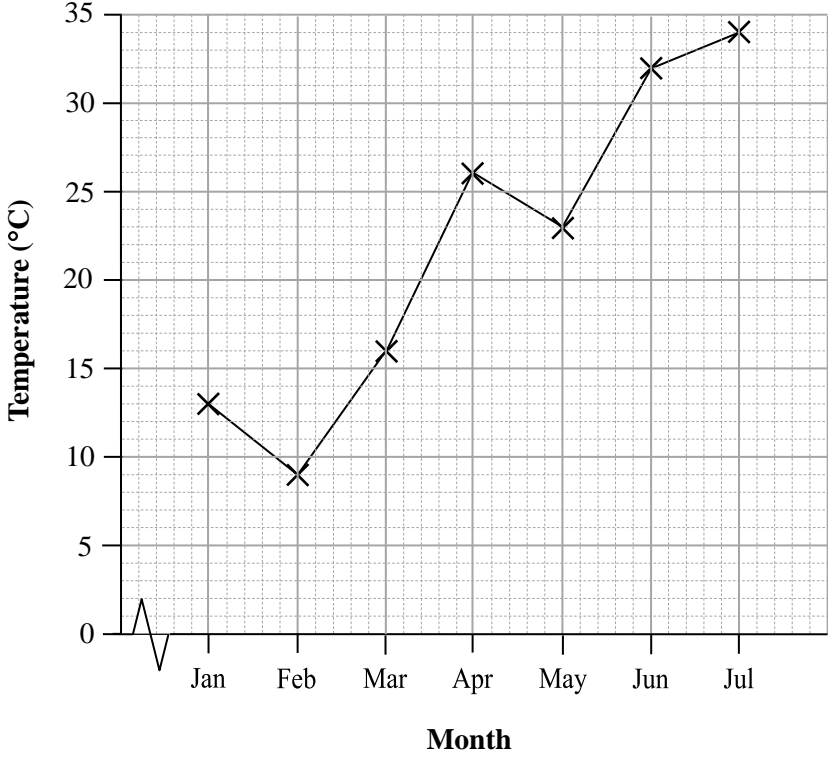
Question Number	Suggested Answers	Marks	Notes
21. (9ME3-21)	(i) $+5$ / $5$ cm represents the water level of Pok Fu Lam Reservoir has risen 5 cm. (ii) $-4$ cm represents the water level of Shing Mun Reservoir has dropped by 4 cm.	1	Must be all correct
22.	7.02	1	
23.		1	(Acceptable range: Between 1 and 1.5)
24. (9ME1-24)	$s = 68$	1	
25. (9ME1-25)	The value of the 5 <sup>th</sup> term of the sequence is $17$ .	1	
26.	$5x^2 + 7x + 2$	1	
27.	$(x+2)^2$ / $(x+2)(x+2)$	1	
28.	$\frac{1}{6a}$	1	
29. (9ME1-29)	approximate solution	1	
30. (9ME3-30)	$-\frac{1}{5} > -100$	1	
31.	The volume of the cone is $1680\pi$ cm <sup>3</sup> .	1	
32.	P and R	1	Must be all correct
33.	(a) $x = 19$ (b) $y = 65$	1	Must be all correct No need to consider unit
34.	$x = 40^\circ$	1	No need to consider unit
35. (9ME1-35)	A, C	1	Must be all correct
36.	$x = 7.93$	1	r.t. 7.93 No need to consider unit



## Section C – Sub-paper 2 (9ME2)

Question Number	Suggested Answers	Marks	Notes
40.	$\text{Profit per cent} = \frac{6500 - 5000}{5000} \times 100\%$ $= 30\%$	1 (40-1)  1* (40-2) 1** (40-3)	
41.	(a) $(x^2)^6$ $= x^{12}$  (b) $\frac{(x^2)^6}{x^{-5}}$  $= \frac{x^{12}}{x^{-5}}$  $= x^{12-(-5)}$  $= x^{17}$	1* (41a)        1 (41b1)  1* (41b2)	Using $\frac{x^m}{x^n} = x^{m-n}$  Correct answer (getting marks 1 1 )
42. (9ME1-43)	$x + 2x + 105^\circ = 180^\circ$ $x = 25^\circ$	1 (42-1)   1* (42-2)	No need to consider unit
43. (9ME1-42)	$\begin{cases} 3x + 5y = 31 & \dots(1) \\ 3x - 5y = 11 & \dots(2) \end{cases}$  (1) – (2) $10y = 20$  $y = 2$ Substitute $y = 2$ into (1)  $3x + 5(2) = 31$  $x = 7$	1 (43-1)  1* (43-2)  1 (43-3)  1* (43-4)	Correct method (eliminating one of the variables) Correct value of y (or x)  Correct method  Both values are correct

Question Number	Suggested Answers	Marks	Notes								
44. (9ME3-44)	<table border="1" data-bbox="424 297 794 398"> <tr> <td><math>x</math></td> <td>-2</td> <td>2</td> <td>4</td> </tr> <tr> <td><math>y</math></td> <td>-4</td> <td>0</td> <td>2</td> </tr> </table> 	$x$	-2	2	4	$y$	-4	0	2	1* (44-1)  1 (44-2)  1* (44-3)	Must be all correct  In case the data in the above table is incorrect, students can still use the ordered pairs to draw a straight line. The line must pass through (2, 0) and the range of $x$ must include the values from -2 to 4.  Correct graph (include: correct position, use ruler to draw the line, pass through the 3 correct points and extend two ends of the line)  If the table is incomplete but no mistakes are found and the graph is correct, (0, 1, 1) can be given.
$x$	-2	2	4								
$y$	-4	0	2								
45.	The surface area of the sphere $= 4\pi(5)^2$ $\approx 314.1592654$ $= 314 \text{ cm}^2$	1 (45-1)  1* (45-2) 1** (45-3)	r.t. $314 \text{ cm}^2$								
46. (9ME1-46)	$\angle ACB = \angle EDB$ (given) $\angle ABC = \angle EBD$ (common angle) $\angle BAC = \angle BED$ ( $\angle$ sum of $\triangle$ ) $\therefore \triangle ABC \sim \triangle EBD$ (AAA)										
<b>Conditions</b>											
	(1) Any correct proof with correct reasons	3									
	(2) Any correct proof with poor presentation, missing reasons or inappropriate reasons	2									
	(3) Incomplete proof with any one correct statement and one corresponding reason	1									
	(4) Incomplete proof	0									

Question Number	Suggested Answers	Marks	Notes																
47.	<p data-bbox="236 360 1054 394"><b>The highest temperature recorded from January to July in a city</b></p>  <table border="1" data-bbox="220 405 1050 1160"> <caption>Data points from the line graph</caption> <thead> <tr> <th>Month</th> <th>Temperature (°C)</th> </tr> </thead> <tbody> <tr> <td>Jan</td> <td>13</td> </tr> <tr> <td>Feb</td> <td>9</td> </tr> <tr> <td>Mar</td> <td>16</td> </tr> <tr> <td>Apr</td> <td>26</td> </tr> <tr> <td>May</td> <td>23</td> </tr> <tr> <td>Jun</td> <td>32</td> </tr> <tr> <td>Jul</td> <td>34</td> </tr> </tbody> </table>	Month	Temperature (°C)	Jan	13	Feb	9	Mar	16	Apr	26	May	23	Jun	32	Jul	34	<p data-bbox="1139 421 1177 454">1*</p> <p data-bbox="1139 562 1177 595">1*</p>	<p data-bbox="1246 421 1509 551">For the correct indication of all 6 marks</p> <p data-bbox="1246 562 1509 981">Correct broken line graph (including the points connected by line segments, no marks will be given if any charts other than broken line graph are shown)</p>
Month	Temperature (°C)																		
Jan	13																		
Feb	9																		
Mar	16																		
Apr	26																		
May	23																		
Jun	32																		
Jul	34																		

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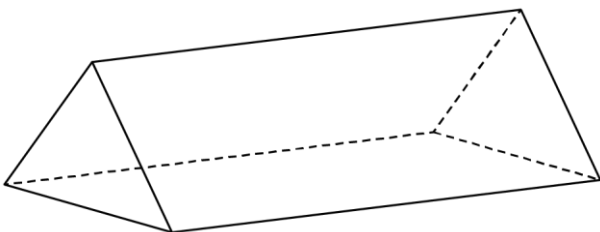
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## Section A – Sub-paper 3 (9ME3) (1 mark each)

1. C (9ME4-1)
2. B
3. A (9ME2-3)
4. A
5. D
6. C (9ME4-4)
7. D (9ME2-7)
8. D
9. B (9ME2-9)
10. D
11. C (9ME2-11)
12. C
13. B
14. D (9ME2-14)
15. C
16. B (9ME4-16)
17. B (9ME2-17)
18. A (9ME4-18)
19. A
20. A (9ME2-20)

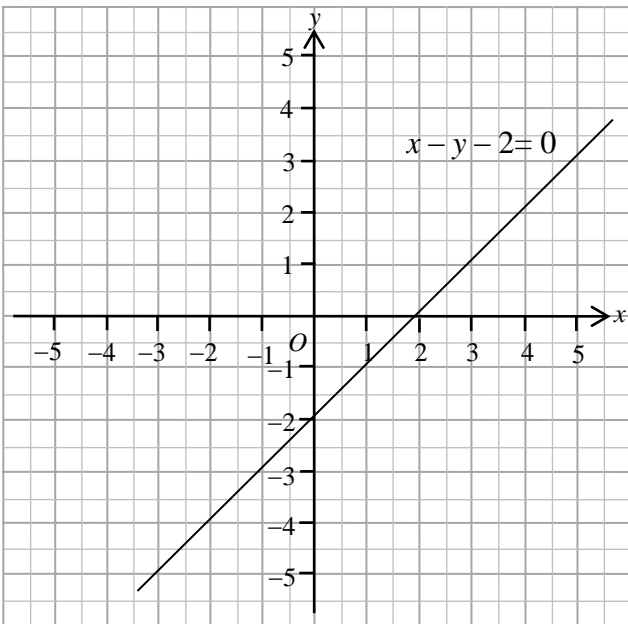
## Section B – Sub-paper 3 (9ME3)

Question Number	Suggested Answers	Marks	Notes
21. (9ME2-21)	(i) <u>+5</u> / <u>5</u> cm represents the water level of Pok Fu Lam Reservoir has risen <u>5</u> cm. (ii) <u>-4</u> cm represents the water level of Shing Mun Reservoir has dropped by <u>4</u> cm.	1	Must be all correct
22.	0.037	1	
23. (9ME4-23)	There are <u>4</u> positive integers less than $\sqrt{20}$ .	1	
24.	$2n$	1	
25.	$5a^2 - ab$	1	
26.	$4x^2 - y^2$	1	
27.	$(x+9)(x+1)$	1	
28.		1	
29. (9ME4-29)	$r = \underline{9}$	1	
30. (9ME2-30)	$-\frac{1}{5} > -100$	1	
31.	$y = \underline{40^\circ}$	1	No need to consider unit
32.	$\angle EAV$ / $\angle VAE$ / $\angle VAC$ / $\angle CAV$	1	
33.	$x = \underline{45^\circ}$	1	No need to consider unit
34.	The coordinates of point $P$ are ( <u>4</u> , <u>3</u> ).	1	Must be all correct
35.	$AB = \underline{26}$ units	1	
36.	(1) $\rightarrow$ (3) $\rightarrow$ (4) $\rightarrow$ (2)	1	



Question Number	Suggested Answers	Marks	Notes
37.	The weighted mean mark of Betty is <u>82.4</u> .	1	
38. (9ME4-38)	(a) There are <u>17</u> staff in the company. (b) The mode of the ages of the staff is <u>27</u> . (c) The number of staff obtaining the extra travel allowance is <u>3</u> .	1 (38a) 1 (38b) 1 (38c)	
39.	The required probability = $\frac{61}{300}$	1	OR 0.203

Section C – Sub-paper 3 (9ME3)

Question Number	Suggested Answers	Marks	Notes								
40.	The amount = $\$3125 \times (1 + 4\%)^2$ = $\$3380$	1 (40-1) 1* (40-2) 1** (40-3)									
41.	The volume of the cylinder $= \pi(8^2)(20)$ $= 1280\pi \text{ cm}^3$	1 (41-1)  1* (41-2) 1** (41-3)									
42.	The area of the parallelogram $= (6-2) \times (8-3)$ $= 20 \text{ sq. units}$	1 (42-1) 1* (42-2) 1** (42-3)	Or other correct methods								
43.	The actual length = $1.2 \times 60$ = $72 \text{ m}$	1 (43-1) 1* (43-2) 1** (43-3)									
44. (9ME2-44)	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td><math>x</math></td> <td>-2</td> <td>2</td> <td>4</td> </tr> <tr> <td><math>y</math></td> <td>-4</td> <td>0</td> <td>2</td> </tr> </table> 	$x$	-2	2	4	$y$	-4	0	2	1*  1  1*	<p>Must be all correct</p> <p>In case the data in the above table is incorrect, students can still use the ordered pairs to draw a straight line. The line must pass through (2, 0) and the range of <math>x</math> must include the values from -2 to 4.</p> <p>Correct graph (include: correct position, use ruler to draw the line, pass through the 3 correct points and extend two ends of the line)</p> <p>If the table is incomplete but no mistakes are found and the graph is correct, (0, 1, 1) can be given.</p>
$x$	-2	2	4								
$y$	-4	0	2								

Question Number	Suggested Answers	Marks	Notes
45.	<p>The length of the postcard is approximately 6 times the length of the stamp, while the width is approximately 3 times the width of the stamp.</p> <p><math>\therefore</math> The area of the postcard</p> $\approx (3 \times 6 \times 4 \times 3) \text{ cm}^2$ $= 216 \text{ cm}^2$	0 0 No evidence of using estimation strategies nor giving reasonable justification	<ul style="list-style-type: none"> <li>♦ Answer only, without any working steps or written explanation</li> <li>♦ The explanation is irrelevant or unreasonable</li> </ul>
		1 0 Partial evidence of using estimation strategies, but the solution is incomplete or contains mistakes	<ul style="list-style-type: none"> <li>♦ Using reasonable estimation strategies, but the solution is incomplete. For instance, only the length of the postcard is estimated about 6 times the length of the stamp</li> <li>♦ The explanation is reasonable, but the answer is outside the acceptable range</li> <li>♦ The explanation is reasonable, but calculation mistakes occurred</li> </ul>
		1 1 Estimate with reasonable justification	<ul style="list-style-type: none"> <li>♦ The answer must be supported by reasonable explanation and within the acceptable range</li> <li>♦ Accept the length of the postcard be 5 times to 7 times the length of the stamp, the width be 3 times to 4 times of the width of the stamp</li> <li>♦ Acceptable range of the area of the postcard: <math>180 \text{ cm}^2</math> to <math>336 \text{ cm}^2</math></li> </ul>
46. (9ME4-43)	$\angle FBC + 62^\circ + 58^\circ = 180^\circ \quad (\text{adj. } \angle\text{s on st. line})$ $\angle FBC = 60^\circ$ $\angle BGE = 60^\circ \quad (\text{given})$ $\therefore \angle FBC = \angle BGE$ $\therefore BC \parallel GE \quad (\text{corr. } \angle\text{s equal})$		Or other correct proofs
	<b>Conditions</b>		
	(1) Any correct proof with correct reasons	3	
	(2) Any correct proof with poor presentation, missing reasons or inappropriate reasons	2	
	(3) Incomplete proof with any one correct statement and one corresponding reason	1	
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Question Number	Suggested Answers	Marks	Notes															
47.	<p>(a)</p> <table border="1" data-bbox="240 371 1098 551"> <thead> <tr> <th data-bbox="240 371 469 427">Amount (\$)</th> <th data-bbox="469 371 624 427">100 – 124</th> <th data-bbox="624 371 778 427">125 – 149</th> <th data-bbox="778 371 933 427">150 – 174</th> <th data-bbox="933 371 1098 427">175 – 199</th> </tr> </thead> <tbody> <tr> <td data-bbox="240 427 469 483">Class mark (\$)</td> <td data-bbox="469 427 624 483">112</td> <td data-bbox="624 427 778 483">137</td> <td data-bbox="778 427 933 483">162</td> <td data-bbox="933 427 1098 483">187</td> </tr> <tr> <td data-bbox="240 483 469 551">Frequency</td> <td data-bbox="469 483 624 551">8</td> <td data-bbox="624 483 778 551">14</td> <td data-bbox="778 483 933 551">16</td> <td data-bbox="933 483 1098 551">2</td> </tr> </tbody> </table> <p>(b) The mean = <math>\frac{112 \times 8 + 137 \times 14 + 162 \times 16 + 187 \times 2}{40}</math>  = \$144.5</p>	Amount (\$)	100 – 124	125 – 149	150 – 174	175 – 199	Class mark (\$)	112	137	162	187	Frequency	8	14	16	2	<p>1* (47a)</p> <p>1 (47b1)</p> <p>1* (47b2)</p> <p>1** (47b3)</p>	<p>Must be all correct</p> <p>Correct method</p>
Amount (\$)	100 – 124	125 – 149	150 – 174	175 – 199														
Class mark (\$)	112	137	162	187														
Frequency	8	14	16	2														

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## Section A – Sub-paper 4 (9ME4) (1 mark each)

1. C (9ME3-1)
2. D
3. C
4. C (9ME3-6)
5. A
6. A (9ME1-8)
7. D (9ME1-9)
8. A
9. A
10. B (9ME1-5)
11. B
12. D (9ME1-4)
13. B
14. C (9ME1-14)
15. B
16. B (9ME3-16)
17. C
18. A (9ME3-18)
19. D
20. D (9ME1-20)

## Section B – Sub-paper 4 (9ME4)

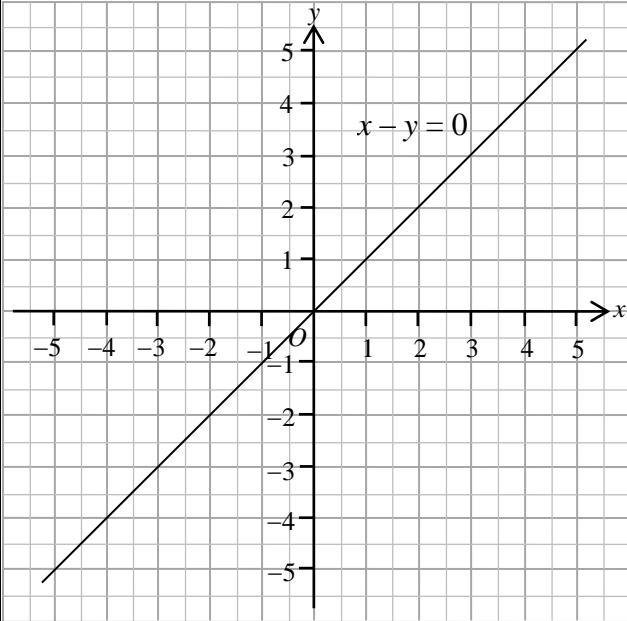
Question Number	Suggested Answers	Marks	Notes
21.	$\frac{1}{4}$	1	
22.	The number of terms of the polynomial is <u>4</u> .	1	
23. (9ME3-23)	There are <u>4</u> positive integers less than $\sqrt{20}$ .	1	
24.	$x = \frac{-162}{5}$ $y = \frac{486}{5}$	1	Must be all correct
25.	$6x^2 + 6xy - 18x$	1	
26.	$5x(x + 3y)$	1	
27.	$B = \frac{12 - A}{5}$	1	
28. (9ME1-28)	$x = \underline{-15}$	1	
29. (9ME3-29)	$r = \underline{9}$	1	
30.	$x \geq 18$	1	
31.	$I, X$	1	Must be all correct
32.	(a) $\triangle LMN \sim \triangle PQR$ (b) 3 sides proportional	1	Must be all correct
33.	$x = \underline{131^\circ}$	1	No need to consider unit
34.	$\angle BHC / \angle CHB / \angle AED / \angle DEA$	1	
35.	The polar coordinates of point $A$ are ( <u>4</u> , <u><math>-60^\circ</math></u> ).	1	Must be all correct and in order
36.	$\theta = \underline{21.7^\circ}$	1	r.t. $21.7^\circ$ No need to consider unit





## Section C – Sub-paper 4 (9ME4)

Question Number	Suggested Answers	Marks	Notes
40. (9ME1-40)	The interest = $3750 \times 2\% \times 3$ = \$225	1 (40-1) 1* (40-2) 1** (40-3)	
41.	$AB^2 = GB^2 - GA^2$ $= 27.3^2 - 25.2^2$ $= 110.25$ $AB = 10.5 \text{ m}$	1 (41-1)  1* (41-2) 1** (41-3)	
42.	$\tan \angle BCT = \frac{TB}{BC}$ $\tan \angle BCT = \frac{85}{140}$ $\angle BCT \approx 31.26373169^\circ$ $\angle BCT = 31.3^\circ$ (corr. to 3 sig. fig.) $\therefore$ The angle of elevation of $T$ from $C$ is $31.3^\circ$ .	1 (42-1)  1* (42-2) 1** (42-3)	r.t. $31.3^\circ$
43. (9ME3-46)	$\angle FBC + 62^\circ + 58^\circ = 180^\circ$ (adj. $\angle$ s on st. line) $\angle FBC = 60^\circ$ $\angle BGE = 60^\circ$ (given) $\therefore \angle FBC = \angle BGE$ $\therefore BC \parallel GE$ (corr. $\angle$ s equal)		Or other correct proofs
	<b>Conditions</b>		
	(1) Any correct proof with correct reasons	3	
	(2) Any correct proof with poor presentation, missing reasons or inappropriate reasons	2	
	(3) Incomplete proof with any one correct statement and one corresponding reason	1	
	(4) Incomplete proof	0	

Question Number	Suggested Answers	Marks	Notes								
44. (9ME1-44)	<table border="1" data-bbox="293 286 751 387"> <tr> <td><math>x</math></td> <td>-3</td> <td>1</td> <td>4</td> </tr> <tr> <td><math>y</math></td> <td>-3</td> <td>1</td> <td>4</td> </tr> </table> 	$x$	-3	1	4	$y$	-3	1	4	<p>1* (44-1)</p> <p>1 (44-2)</p> <p>1* (44-3)</p>	<p>Must be all correct</p> <p>In case the data in the above table is incorrect, students can still use the ordered pairs to draw a straight line. The line must pass through (1, 1) and the range of <math>x</math> must include the values from -3 to 4.</p> <p>Correct graph (include: correct position, use ruler to draw the line, pass through the 3 correct points and extend two ends of the line)</p> <p>If the table is incomplete but no mistakes are found and the graph is correct, (0, 1, 1) can be given.</p>
$x$	-3	1	4								
$y$	-3	1	4								
45.	<p>The total amount needed for buying the souvenirs</p> $= \$29.9 \times 598$ $\leq \$30 \times 600$ $= \$18000$ $< \$20000$ <p><math>\therefore</math> The Student Union has enough money to buy the souvenirs.</p>	<p>0 0 No evidence of using estimation strategies nor giving reasonable justification</p> <p>1 0 Partial evidence of using estimation strategies, but the solution is incomplete or contains errors</p> <p>1 1 Estimate with reasonable justification</p>	<ul style="list-style-type: none"> <li>◆ Exact calculation only</li> <li>◆ The estimate is given only after exact calculation</li> <li>◆ Use wrong methods to get the approximations for the underlined values</li> <li>◆ Approximate the underlined values correctly, but the total amount needed for buying the souvenirs is omitted or wrongly estimated</li> <li>◆ Estimate the total amount needed for buying the souvenirs correctly, but the conclusion is omitted or wrong</li> <li>◆ Correct method used, but errors occurred</li> <li>◆ No need to consider unit/presentation</li> <li>◆ The conclusion must be correct and aligned with a reasonable explanation</li> </ul>								

Question Number	Suggested Answers	Marks	Notes																							
46.	<p>The area of the sector</p> $= \pi(9^2) \left( \frac{55^\circ}{360^\circ} \right)$ <p><math>\approx 38.87720909</math></p> <p><math>= 38.9 \text{ cm}^2</math> (corr. to 3 sig. fig.)</p>	<p>1 (46-1)</p> <p>1* (46-2)</p> <p>1** (46-3)</p>	r.t. $38.9 \text{ cm}^2$																							
47.	<p>(a)</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2"></th> <th colspan="3">Second Coin (\$)</th> </tr> <tr> <th colspan="2"></th> <th>2</th> <th>5</th> <th>10</th> </tr> </thead> <tbody> <tr> <th rowspan="3" style="vertical-align: middle;">First Coin (\$)</th> <th>2</th> <td style="background-color: black;"></td> <td>(2, 5)</td> <td>(2, 10)</td> </tr> <tr> <th>5</th> <td>(5, 2)</td> <td style="background-color: black;"></td> <td>(5, 10)</td> </tr> <tr> <th>10</th> <td>(10, 2)</td> <td>(10, 5)</td> <td style="background-color: black;"></td> </tr> </tbody> </table> <p>(b) The probability that the amount of the coins drawn by Michael is more than \$13 = <math>\frac{1}{3}</math></p>			Second Coin (\$)					2	5	10	First Coin (\$)	2		(2, 5)	(2, 10)	5	(5, 2)		(5, 10)	10	(10, 2)	(10, 5)		<p>1* (47a)</p> <p>1* (47b)</p>	Must be all correct
		Second Coin (\$)																								
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