

Education Bureau
Territory-wide System Assessment 2026
Secondary 3 Mathematics
Marking Scheme

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

***Mark for Answer:**

- (1) The Mark for Answer may be given when there is a correct answer without any work shown.
- (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:**

- (1) If the work shown is correct but the answer is incorrect, the Mark for Presentation may be given.
- (2) If the work shown is incorrect, the Mark for Presentation will not be given.
- (3) If the numerical value of the answer is correct but not the approximate value as required by the question, the Mark for Presentation will not be given.
- (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)

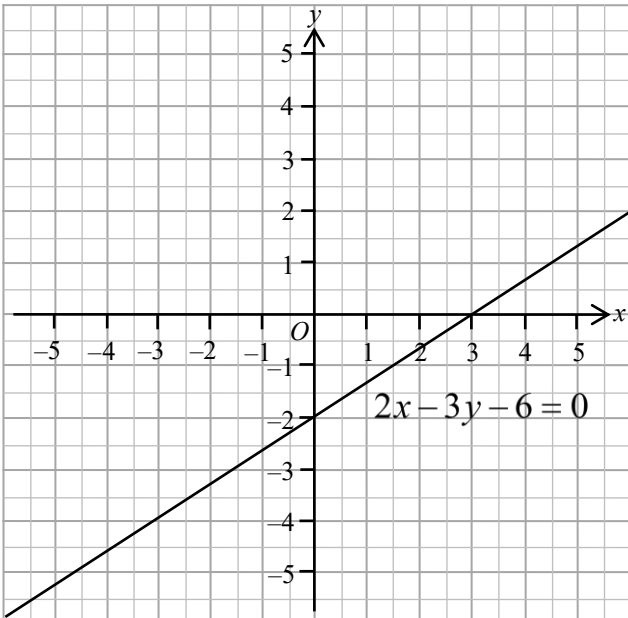
1. B (9ME4-1)
2. D (9ME4-2)
3. B
4. C (9ME2-5)
5. C (9ME4-4)
6. D (9ME4-5)
7. B (9ME4-7)
8. A
9. A
10. D (9ME2-11)
11. C (9ME4-12)
12. B
13. A (9ME2-13)
14. A (9ME2-14)
15. C (9ME2-16)
16. C
17. D
18. B (9ME2-18)
19. A (9ME4-19)
20. D (9ME2-20)

Section B – Sub-paper 1 (9ME1)

Question Number	Suggested Answers	Marks	Notes
21.	36	1	
22.	$A = \underline{-3}$ $B = \underline{0}$ $C = \underline{5 / +5}$	1	All must be correct
23.	The percentage change in the number of students in the school is <u>5% / +5%</u> .	1	
24. (9ME2-23)	(i) Direct proportion (ii) Inverse proportion	1	All must be correct
25. (9ME4-25)	The number of fans of Team A : The total number of fans of both teams = <u>16</u> : <u>25</u>	1	
26. (9ME2-26)	<u>3.16×10^7</u> seconds	1	No need to consider unit
27. (9ME4-28)	$3x^2 - 2xy - y^2$	1	
28.	$(2x - 3)(x + 6)$	1	
29. (9ME4-29)	$(4m + 3)(4m - 3)$	1	
30. (9ME4-30)	$W = \underline{-\frac{15}{4}}$	1	
31. (9ME4-31)	$y < 30$	1	
32.	Cone B	1	
33.	<u>BCDA and CBAD</u>	1	All must be correct
34.	$x = \underline{40}$ $y = \underline{7}$	1	All must be correct No need to consider unit
35.	20	1	
36. (9ME2-35)	$x = \underline{6}$	1	No need to consider unit

Question Number	Suggested Answers								Marks	Notes
37. (9ME4-37)	(a)								1 (37a) 1 (37b) 1 (37c)	All must be correct All must be correct
	Daily rainfall (mm)	0 – 15	15 – 30	30 – 45	45 – 60	60 – 75	75 – 90	90 – 105		
	Frequency	5	6	3	7	4	4	2		
	(b) There were <u> 6 </u> days in July with rainfall of not less than 75 mm .									
	(c) The modal class of the daily rainfall for July was <u> 45 </u> mm – <u> 60 </u> mm .									
38. (9ME2-39)	(a) The median of the standing long jump results of 30 students was <u> 128 </u> cm .								1 (38a)	No need to consider unit
	(b) There were <u> 10 </u> students in that group who needed to attend the Fitness Enhancement Class.								1 (38b)	
39.	The weighted mean score of Supplier <i>A</i> is <u> 28 </u> .								1	

Section C – Sub-paper 1 (9ME1)

Question Number	Suggested Answers	Marks	Notes								
40.	Let T be the number of years. $3\,400 \times 3\% \times T = 612$ $T = 6$ $\therefore$ It takes 6 years.	1 (40-1) 1* (40-2) 1** (40-3)									
41. (9ME4-42)	<table border="1" style="margin: 10px auto;"> <tr> <td>x</td><td>-3</td><td>0</td><td>3</td></tr> <tr> <td>y</td><td>-4</td><td>-2</td><td>0</td></tr> </table> 	x	-3	0	3	y	-4	-2	0	1* (41-1) 1 (41-2) 1* (41-3)	All must be 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 $(0, -2)$ and the range of x must include the values from -3 to 3. 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	-3	0	3								
y	-4	-2	0								

Question Number	Suggested Answers	Marks	Notes
42.	The area of the sector $= \pi(24)^2 \left(\frac{118^\circ}{360^\circ} \right)$ $\approx 593.132\ 693$ $= 593\text{ cm}^2$ (corr. to 3 sig. fig.)	1 (42-1) 1* (42-2) 1** (42-3)	
43. (9ME2-42)	$\begin{cases} 4x + y = 13 & \dots(1) \\ 2x + y = 9 & \dots(2) \end{cases}$ (1) – (2) : $2x = 4$ $x = 2$ Substitute $x = 2$ into (2), $2(2) + y = 9$ $y = 5$	1 (43-1) 1* (43-2) 1 (43-3) 1* (43-4)	Eliminated one of the variables by using a correct method Correct value of x (or y) Correct method Both values must be correct
44. (9ME2-43)	Let the height of B be x cm . $\left(\frac{x}{432} \right)^3 = \frac{1}{27}$ $x = 144$ $\therefore$ The height of B is 144 cm .	1 (44-1) 1* (44-2) 1** (44-3)	
45.	$\angle CED + 91^\circ + 69^\circ = 180^\circ$ ($\angle$ sum of $\triangle$) $\angle CED = 20^\circ$ $\therefore \angle ABE = \angle CED = 20^\circ$ $\therefore AB \parallel ED$ (alt. $\angle$s equal)		Or other correct proofs
Conditions			
(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																
46.	(a)	1* (46a)	All must be correct																
	<table><tr><td>Advertising income less than (thousand dollars)</td><td>10.5</td><td>20.5</td><td>30.5</td><td>40.5</td><td>50.5</td><td>60.5</td><td>70.5</td></tr><tr><td>Cumulative frequency</td><td>2</td><td>10</td><td>13</td><td>15</td><td>26</td><td>29</td><td>40</td></tr></table>			Advertising income less than (thousand dollars)	10.5	20.5	30.5	40.5	50.5	60.5	70.5	Cumulative frequency	2	10	13	15	26	29	40
	Advertising income less than (thousand dollars)			10.5	20.5	30.5	40.5	50.5	60.5	70.5									
Cumulative frequency	2	10	13	15	26	29	40												
(b)																			
	Advertising income for 40 online channels Cumulative frequency Advertising income (thousand dollars)	1* (46b)	Correct cumulative frequency polygon (including correct indication of all 3 points and the points are connected by line segments)																

Question Number	Suggested Answers	Marks	Notes
47.	Total number of flights = 10 The number of flights with delays of less than 90 minutes = 4 < 5 $\therefore$ It is not true that over half of the flights had departure delay times of less than 90 minutes. $\therefore$ I disagree with the spokesperson's claim.	0 0	- Without any reasonable explanation - Conclusion is incorrect
		1 0	- Explanation is reasonable but incomplete - Explanation is reasonable but no conclusion is drawn
		1 1	Explanation supported by data is reasonable and the conclusion is correct