



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

SENIOR CERTIFICATE EXAMINATIONS/ NATIONAL SENIOR CERTIFICATE EXAMINATIONS *SENIORSERTIFIKAAT-EKSAMEN/* *NASIONALE SENIORSERTIFIKAAT-EKSAMEN*

MATHEMATICAL LITERACY P2/WISKUNDIGE GELETTERDHEID V2

MAY/JUNE/MEI/JUNIE 2025

MARKING GUIDELINES/NASIENRIGLYNE

MARKS/PUNTE: 150

Symbol/Kode	Explanation/Verduideliking
MA	Method with accuracy/Metode met akkuraatheid
MCA	Method with constant accuracy/Metode met volgehoue akkuraatheid
CA	Consistent accuracy/Volgehoue akkuraatheid
A	Accuracy/Akkuraatheid
C	Conversion/Herleiding
RT	Reading from a table/a graph/document/diagram/Lees vanaf tabel/grafiek/diagram
SF	Correct substitution in a formula/Korrekte vervanging in formule
O	Opinion/Explanation/Reasoning /Opinie/Verduideliking/redenasie
P	Penalty, e.g. for no units, incorrect rounding off, etc./Penalisering bv. vir geen eenhede/verkeerde afronding, ens.
R	Rounding off/Afronding
NPR	No penalty for rounding/Geen penalisering vir afronding nie
NPU	No penalty for omitting the unit, but a wrong unit is penalised. / Geen penalisasie indien die eenheid uitgelos is nie, maar 'n verkeerde eenheid word wel gepenaliseer.
AO	Answer only/Slegs antwoord
RCA	Rounding consistent with accuracy/Afronding met volgehoue akkuraatheid

These marking guidelines consist of 15 pages.

Hierdie nasienriglyne bestaan uit 15 bladsye.

NOTE:

- If a candidate answers a question TWICE, only mark the FIRST attempt.
- If a candidate has crossed out (cancelled) an attempt to a question and NOT redone the solution, mark the crossed out (cancelled) version.
- Consistent accuracy (CA) applies in ALL aspects of the marking guidelines; however, it stops at the second calculation error.
- NOTE: consistent accuracy (CA) does not apply in cases of a breakdown.
- If the candidate presents any extra solution when reading from a graph, table, layout plan and map, then penalise for every extra item presented.
- As a general marking principle, if a candidate has incurred one mistake and there is evidence of sound mathematics thereafter, then that candidate should lose one mark only.
- Rounding is an independent mark.
- A conclusion mark can only be given if relevant calculations precede it.
- No penalty for rounding (NPR) if the first decimal is correct.

LET WEL:

- As 'n kandidaat 'n vraag TWEE KEER beantwoord, sien slegs die EERSTE poging na.
- As 'n kandidaat 'n antwoord van 'n vraag doodtrek (kanselleer) en nie oordoen nie, sien die doodgetrekte (gekanselleerde) poging na.
- Volgehoue akkuraatheid (CA) word in ALLE aspekte van die nasienriglyne toegepas, dit hou op by die tweede berekeningsfout.
- Let wel: volgehoue akkuraatheid (CA) geld nie in die geval van 'n afbreuk nie.
- Wanneer 'n kandidaat aflesings vanaf 'n grafiek, tabel, uitlegplan en kaart geneem en ekstra antwoorde gee, penaliseer vir elke ekstra item.
- 'n Algemene nasienbeginsel is dat indien 'n kandidaat een fout maak en daarna voortgaan met korrekte wiskunde, dat die kandidaat slegs een punt verloor
- Afronding tel as 'n onafhanklike punt
- 'n Gevolgtrekkingspunt kan slegs gegee word indien relevante berekeninge dit voorgaan.
- Geen penalisering vir ronding (NPR) as die eerste desimaal korrek is nie.

NOTE: Questions marked with * refers to the notes.

Questions where the numbers are encircled are the ones where there is a tolerance range.

QUESTION/VRAAG 1 [28 MARKS/PUNTE] Answer Only AO - full marks			
Q/V	Solution/Oplossing	Explanation/Verduideliking	T/L
*			
1.1.1	I ✓✓ A	2A correct choice (2)	MP L1 E
*			
1.1.2	B ✓✓ A	2A correct choice (2)	M L1 E
*			
1.1.3	H ✓✓ A	2A correct choice (2)	M L1 E
*			
1.1.4	G ✓✓ A	2A correct choice (2)	MP L1 E
1.2.1	✓✓ A Less than / kleiner as	2A correct choice (2)	P L1 E
1.2.2	down / af ✓✓ A	2A correct choice (2)	M L1 E
1.2.3	Two / twee ✓✓ A	2A correct choice (2)	M L1 E
1.2.4	2D ✓✓ A	2A correct choice (2)	MP L1 E
1.3.1	1,75 °C ✓✓ RT	2RT correct choice NPU (2)	M L1 E
*			
1.3.2	Kiribati ✓✓ RT	2RT correct country (2)	M L1 E
*			
1.3.3	✓ RT -5,35°C ≈ -5°C ✓ R	1RT correct temperature 1R correct rounding NPU (2)	M L1 E
1.3.4	✓ RT ✓ MA Difference /Verskil = $27,85^{\circ}\text{C} - (-0,70^{\circ}\text{C})$ = $28,55^{\circ}\text{C}$ ✓ A	1RT correct temperature 1MA subtracting $-0,70^{\circ}\text{C}$ from $27,85^{\circ}\text{C}$ 1A simplification Accept $-28,55^{\circ}\text{C}$ (3)	M L1 E
1.3.5	Djibouti/Djiboeti and/en Mauritius ✓ A ✓ A Mauritania/ Mauritanië and /en Tuvalu ✓ A	2A 1 st correct pair 1A 2 nd correct pair (3)	MP L1 E
		[28]	

QUESTION/VRAAG 2 [23 MARKS/PUNTE]			
Q/V	Solution/ <i>Oplossing</i>	Explanation/ <i>Verduideliking</i>	T/L
2.1.1	✓✓ RT Cleaning supplies/ <i>Skoonmaakmiddels</i>	2RT correct product	MP L2 E (2)
2.1.2	✓A Pet care is next to the sweets, just to the left of the checkout points. ✓A /Between sweets and checkout point/ Last section before checkout point <i>Troeteldiersorg is langs die lekkers, net links van die betaalpunte./ Tussen lekkers en betaalpunt /Laaste afdeling voor betaalpunte</i>	1A explanation 1st reference. 1A explanation 2nd reference.	MP L2 E (2)
2.1.3	✓✓ A Dairy and cheese. / <i>Suiwel en kaas</i>	2A correct section	MP L1 E (2)
2.1.4	✓✓ A anticlockwise. / <i>anti-kloksgewys</i>	2A correct option	MP L1 M (2)
2.1.5	✓✓ O Any ONE of the following: <ul style="list-style-type: none">• Encourages customers to make purchases.• Pleasant environment – customers like to shop there• To encourage customers to return to shop again• Easy to find items/easy access/convenience• User friendly• Save time <i>Enige EEN van die volgende:</i> <ul style="list-style-type: none">• <i>Dit moedig kliënte aan om te koop.</i>• <i>Aangename omgewing – kliënte hou daarvan om daar te koop.</i>• <i>Om kliënte aan te moedig om terug te keer na winkel vir aankope.</i>• <i>Maklik om items te vind/maklik toeganklik/gerieflik</i>• <i>Verbruikersvriendelik</i>• <i>Bespaar tyd</i>	2O reason	MP L4 M (2)

Q/V	Solution/ <i>Oplossing</i>	Explanation/ <i>Verduideliking</i>	T/L
2.1.6	Fridges ✓✓ O Need power/plugs to run. Safety – the wires do not trip the customers Easy to pack Temperature control To have all the cold products lined up in one row.	2O reason	MP
	<i>Yskaste</i>		L4
	<i>Benodig krag/muurproppe.</i>		M
	<i>Veiligheid – sodat kliente nie oor die drade val nie</i>		
	<i>Maklik om te pak</i>		
	<i>Temperatuurregulering(beheer)</i>		(2)
	<i>Om alle koue produkte in een ry te hê.</i>		
2.1.7	✓✓ O Tills / Teller / cashiers / it is the place where you need to pay.		MP
	<i>Kasregisters / kassiere / dit is die plek waar jy betaal.</i>		L4
			M
2.2.1	a = 18 ✓A	1A 18	P
	b = 12 ✓A	1A 12	L2
	c = 88 ✓A	1A 88	E
	d = 156 ✓A	1A 156	

QUESTION/VRAAG 3 [27 MARKS/PUNTE]			
Q/V	Solution/Oplossing	Explanation/Verduideliking	T/L
* 3.1.1	<p>Length of fencing /Lengte van heining $= 12 \text{ m} + 8,7 \text{ m} + 2,6 \text{ m} + 12 \text{ m}$ ✓ MA ✓ CA $= 35,3 \text{ m}$ ✓ A</p> <p>OR/OF</p> <p>Length of fencing /Lengte van heining $= 12 \text{ m} + 8,7 \text{ m} + 2,6 \text{ m} + 1,4 \text{ m} + 10,6 \text{ m}$ ✓ MA ✓ CA $= 35,3 \text{ m}$ ✓ A</p>	<p>1MA adding all the values 1CA simplification 1A unit</p>	M L2 E (3)
* 3.1.2 (a)	<p>Radius = $120 \text{ cm} \div 2 = 60 \text{ cm}$ ✓ A</p> <p>Volume of the fish pond /Volume van visdam $= 3,142 \times \text{radius}^2 \times \text{depth} / \text{diepte}$</p> <p>$= 3,142 \times (\frac{120}{2} \text{ cm})^2 \times 0,5 \text{ m}$ ✓ SF ✓ C $= 3,142 \times (60 \text{ cm})^2 \times 50 \text{ cm}$</p> <p>$= 565\ 560 \text{ cm}^3$ ✓ CA</p>	<p>1A radius</p> <p>1SF substitution 1C conversion m to cm 1CA simplification</p>	M L2 M (4)
* 3.1.2 (b)	<p>Diameter / Middellyn = $120 \text{ cm} + (2 \times 20 \text{ cm}) = 160 \text{ cm}$ ✓ A</p> <p>Circumference of the outer edge /Buite omtrek $= 3,142 \times \text{diameter} / \text{middellyn}$ $= 3,142 \times 160 \text{ cm}$ ✓ SF $= 502,72 \text{ cm}$ ✓ CA</p> <p>OR/OF</p> <p>Radius = $60 \text{ cm} + 20 \text{ cm} = 80 \text{ cm}$ $C = 3,142 \times 2 \times 80 \text{ cm}$ ✓ SF $= 502,72 \text{ cm}$ ✓ CA</p>	<p>1A adding both sides 20 cm</p> <p>1SF substitution 1CA simplification</p> <p>OR/OF</p> <p>1A adding one side 20 cm to inner radius 1SF substitution 1CA simplification</p>	M L2 M (3)
3.1.3 (a)	<p>Length = $8,7 \text{ m} + 2,6 \text{ m} = 11,3 \text{ m}$ ✓ A</p> <p>Area of a rectangle = length/lengte × width/breedte $36,16 \text{ m}^2 = 11,3 \text{ m} \times \text{width} / \text{breedte}$ ✓ SF</p> <p>Width /breedte $= \frac{36,16 \text{ m}^2}{11,3 \text{ m}}$ ✓ MCA $= 3,2 \text{ m}$ ✓ CA</p>	<p>1A length</p> <p>1SF substitution</p> <p>1MCA change the subject 1CA simplification</p>	M L3 M (4)

Q/V	Solution/oplossing	Explanation/Verduideliking	T/L
3.1.3 (b)	$\begin{aligned} \text{Volume} &= \text{Area} \times \text{depth} / \text{Oppervlakte} \times \text{diepte} \\ &= 36,16 \text{ m}^2 \times 150 \text{ mm} \quad \checkmark \text{ SF} \\ &= 36,16 \text{ m}^2 \times 0,150 \text{ m} \quad \checkmark \text{ C} \\ &= 5,424 \text{ m}^3 \quad \checkmark \text{ CA} \end{aligned}$ $10 \text{ m}^3 = 118 \text{ wheelbarrows} / \text{kruiwaens}$ $5,424 \text{ m}^3 = n$ $n = \frac{5,424 \text{ m}^3}{10 \text{ m}^3} \times 118 \quad \checkmark \text{ MCA}$ $\approx 65 \text{ wheelbarrows/kruiwaens} \quad \checkmark \text{ CA}$ <p>INVALID / ONGELDIG $\quad \checkmark \text{ O}$</p>	1SF substitution 1C converting mm to m 1CA simplification 1MCA using ratio 1CA simplification 1O conclusion [Accept 64]	M L4 D
	OR/OF	OR/OF	
	$118 \text{ wheelbarrows/kruiwaens} = 10 \text{ m}^3$ $\therefore 65 \text{ wheelbarrows/kruiwaens} = x$ $\therefore \frac{118 \times x}{118} = \frac{65 \times 10 \text{ m}^3}{118} \quad \checkmark \text{ MA}$ $\therefore x = 5,5084745 \text{ m}^3 \quad \checkmark \text{ CA}$ $\text{Volume} = \text{Area} \times \text{depth} / \text{Oppervlakte} \times \text{diepte}$ $= 36,16 \text{ m}^2 \times 150 \text{ mm} \quad \checkmark \text{ SF}$ $= 36,16 \text{ m}^2 \times 0,150 \text{ m} \quad \checkmark \text{ C}$ $= 5,424 \text{ m}^3 \quad \checkmark \text{ CA}$ <p>INVALID/ONGELDIG $\quad \checkmark \text{ O}$</p>	1MA using ratio 1CA simplification 1SF substitution 1C converting mm to m 1CA simplification 1O conclusion	
	OR/OF	OR/OF	
	$118 \text{ wheelbarrows/kruiwaens} = 10 \text{ m}^3$ $1 \text{ wheelbarrow/kruiwaens} = \frac{10}{118} \text{ m}^3$ $= 0,0847457622 \text{ m}^3 \quad \checkmark \text{ MA}$ $\text{Volume} = 36,16 \text{ m}^2 \times 0,15 \text{ m} \quad \checkmark \text{ C} \quad \checkmark \text{ SF}$ $= 5,424 \text{ m}^3 \quad \checkmark \text{ CA}$ $\therefore \text{No of wheelbarrows/Aantal kruiwaens}$ $= \frac{5,424 \text{ m}^3}{0,084757626 \text{ m}^2}$ $= 64,005$ $\approx 65 \quad \checkmark \text{ CA}$ <p>INVALID/ONGELDIG $\quad \checkmark \text{ O}$</p>	1MA using ratio 1SF substitution 1C converting mm to m 1CA simplification 1CA simplification 1CA simplification 1O conclusion [Accept 64]	(6)

Q/V	Solution/oplossing	Explanation/Verduideliking	T/L
3.2.1	12 ✓✓ A	2A correct number	M
			(2)
* 3.2.2	Total cost (excl) / <i>Totale koste (uitsluitende)</i>		M
			L2
			M

QUESTION/VRAAG 4 [36 MARKS/PUNTE]			
Q/V	Solution/ <i>Oplossing</i>	Explanation/ <i>Verduideliking</i>	T&L
4.1.1	<p>Ratio / <i>Verhouding</i> \sqrt{RT} $= 11,6 : 7,6 \checkmark MA$ $= 29 : 19 \checkmark A$</p>	<p>1RT correct values 1MA correct order 1A simplification AO</p>	M L2 M (3)
* 4.1.2	<p>Monday to Friday / <i>Maandag tot Vrydag</i> $= 17:00 - 07:30$ $= 9 \text{ hours}/\text{uur} 30 \text{ min} \checkmark A$</p> <p>Total for Mon-Fri/ <i>Totaal vir Maan-Vry</i> $= 9 \text{ hours}/\text{uur} 30 \text{ min} \times 5 \checkmark MCA$ $= 47,5 \text{ hours}/\text{uur} \checkmark CA$</p> <p>Saturdays / <i>Saterdae</i> $= 13:00 - 08:00$ $= 5 \text{ hours } 0 \text{ min} \checkmark A$</p> <p>Total time / <i>Totale tyd</i> $= 47,5 \text{ hours}/\text{uur} + 5 \text{ hours}/\text{uur}$ $= 52,5 \text{ hours}/\text{uur} \checkmark C$</p>	<p>1A hours per day</p> <p>1 MCA multiplying by 5 1CA time for 5 days</p> <p>1A time for Saturday</p> <p>1CA simplification</p>	M L2 M (5)
4.1.3	<p>Volume / <i>Volume</i> $= 11,6 \text{ cm} \times 7,6 \text{ cm} \times 10,5 \text{ cm} \checkmark SF$ $= 925,68 \text{ cm}^3 \checkmark A$</p> <p>Capacity / <i>Kapasiteit</i> $1 \text{ cm}^3 = 1 \text{ m}\ell$ $\therefore 925,68 \text{ cm}^3 = 925,68 \text{ m}\ell \checkmark C$</p> <p>Water volume $= 925,68 \times 75\% \checkmark MCA$ $= 694,26 \text{ m}\ell \checkmark CA$</p> <p>Leftover / <i>Oorblywend</i> $= 1 000 \text{ m}\ell - 694,26 \text{ m}\ell \checkmark MCA$ $= 305,74 \text{ m}\ell \checkmark CA$</p>	<p>1SF correct substitution</p> <p>1A simplification</p> <p>1C capacity in $\text{m}\ell$</p> <p>1MCA calculating 75% of tank</p> <p>1CA simplification</p> <p>1MCA subtracting 1CA $\text{m}\ell$ left</p>	M L3 M (7)

Q/V	Solution/ <i>Oplossing</i>	Explanation/ <i>Verduideliking</i>	T&L
4.2.1	D ✓A	1A correct letter (1)	MP L1 E
4.2.2	A ✓A	1A correct letter (1)	MP L1 E
4.2.3	F ✓A	1A correct letter (1)	MP L1 E
4.2.4	B ✓A	1A correct letter (1)	MP L1 E
4.2.5	C ✓A	1A correct letter (1)	MP L1 E
4.2.6	E ✓A	1A correct letter (1)	MP L1 E
4.3.1	<p>1 mm = 0,0394 inch/ <i>duim</i> <i>Height / Hoogte</i></p> $= \frac{\sqrt{RT}}{0,0394 \text{ inches/mm}} \quad \checkmark \text{MA}$ $= 4,3 \text{ inches} \quad \checkmark \text{CA}$ $= 109,1370558 \text{ mm} \quad \checkmark \text{CA}$ $= 10,9 \text{ cm} \quad \checkmark \text{C OR } 10,914 \text{ cm OR } 10,91 \text{ cm}$	<p>1RT correct height 4,3 inches 1MA dividing with 0,0394 inch 1CA simplification in mm 1C conversion from mm to cm NPR</p> <p>(4)</p>	M L2 M
4.3.2	<p>Length / <i>Lengte</i></p> $= 12 \text{ cm} + 5 \text{ cm} \quad \checkmark \text{MA}$ $= 17 \text{ cm} \quad \checkmark \text{A}$ <p><i>Number lengthwise / Getal lengtegewys</i></p> $= 199 \text{ cm} \div 17 \text{ cm} \quad \checkmark \text{MCA}$ $= 11,70588235$ $\approx 11 \quad \checkmark \text{CA}$ <p><i>But / maar</i></p> $17 \text{ cm} \times 11 = 187 \text{ cm} \quad \checkmark \text{MCA}$ <p><i>And/ En</i> $199 \text{ cm} - 187 \text{ cm}$</p> $= 12 \text{ cm} \quad \checkmark \text{CA}$ <p><i>Number of mini aquaria / Getal mini akwariums</i></p> $= 11 + 1$ $= 12 \quad \checkmark \text{CA}$ <p>OR/OF</p>	<p>1MA adding length and space 1A simplification 1MCA dividing 1CA simplification 1MCA calculating space left 1CA simplification 1CA simplification</p>	MP L3 D

Q/V	Solution/ <i>Oplossing</i>	Explanation/ <i>Verduideliking</i>	T&L
	<p>Tank and space / <i>Tenk en spasie</i> $= 12 \text{ cm} + 5 \text{ cm}$ ✓MA $= 17 \text{ cm}$ ✓A</p> <p>Place 2 tanks at the ends/<i>Plaas 2 tenke aan die einde</i> $\sqrt{\text{MA}}$ $12 \text{ cm} + 12 \text{ cm} = 24 \text{ cm}$</p> <p>Two tanks and 1 space/<i>Twee tenke en 1 spasie</i>: $24 \text{ cm} + 5 \text{ cm} = 29 \text{ cm}$ ✓CA</p> <p>Space left/<i>Spasie oor</i> $= 199 \text{ cm} - 29 \text{ cm} = 170 \text{ cm}$ ✓MCA</p> <p>Use of space left/<i>Gebruik van spasie oor</i> $= \frac{170 \text{ cm}}{17 \text{ cm}}$ $= 10 \text{ tanks}$ ✓CA</p> <p>Total no of tanks = $2 + 10$ $= 12$ ✓CA</p>	<p>1MA adding length and space 1A simplification</p> <p>1MA adding</p> <p>1CA simplification</p> <p>1MCA simplification</p> <p>1CA simplification</p> <p>1CA simplification</p>	
* 4.3.3	<p>Length of 2nd row's tank resting on 1st row <i>Lengte van 2de ry se tenk wat rus op 1ste ry</i></p> <p>$= 12 \text{ cm} - 5 \text{ cm}$ $= 7 \text{ cm}$ ✓A</p> <p>On each side /<i>aan elke kant</i> $= 7 \text{ cm} \div 2$ ✓MA $= 3,5 \text{ cm}$</p> <p>$d = 12 \text{ cm} - 3,5 \text{ cm}$ $= 8,5 \text{ cm}$ ✓CA</p> <p>Her statement is VALID ✓O</p> <p style="text-align: center;">OR/OF</p>	<p>1A subtracting values</p> <p>1MA dividing by 2</p> <p>1CA simplification</p> <p>1O conclusion</p> <p style="text-align: center;">OR/OF</p>	MP L4 M

Q/V	Solution/ <i>Oplossing</i>	Explanation/ <i>Verduideliking</i>	T&L
	OR/OF Length on 2 nd row/ <i>Lengte op 2de ry</i> $\checkmark A$ $d + 12 \text{ cm} + 5 \text{ cm} + 12 \text{ cm} + d = 46 \text{ cm}$ $\checkmark A$ Therefore/ <i>Daarom</i> $2d = 46 \text{ cm} - 29 \text{ cm}$ $2d = 17 \text{ cm}$ $\checkmark MCA$ $d = 8,5 \text{ cm}$ $\checkmark O$ VALID/ <i>GELDIG</i> OR/OF Total length of wall/ <i>Total lengte van muur</i> $\checkmark A$ $\checkmark A$ $d + (12 \text{ cm} + 5 \text{ cm}) \times 10 + 12 \text{ cm} + d = 199 \text{ cm}$ Therefore/ <i>Daarom</i> $2d = 199 \text{ cm} - 182 \text{ cm}$ $2d = 17 \text{ cm}$ $d = 8,5 \text{ cm}$ $\checkmark MCA$ VALID/ <i>GELDIG</i> $\checkmark O$ OR/OF $12 \text{ cm} + 5 \text{ cm} + 12 \text{ cm} + 5 \text{ cm} + 12 \text{ cm} = 46 \text{ cm}$ $\checkmark A$ $46 \div 2 = 23$ $\checkmark MA$ $5 \div 2 = 2,5$ $12 + 2,5 = 14,5$ $23 - 14,5 = 8,5$ $\checkmark CA$ VALID/ <i>GELDIG</i> $\checkmark O$ OR/OF $2d = 1 \text{ tank} + 1 \text{ space}$ $= 12 \text{ cm} + 5 \text{ cm}$ $\checkmark A$ $= 17 \text{ cm}$ $d = 17 \text{ cm} \div 2$ $\checkmark MA$ $= 8,5 \text{ cm}$ $\checkmark CA$ VALID/ <i>GELDIG</i> $\checkmark O$	OR/OF 1A adding values 1A 46 cm 1MCA dividing by 2 1O conclusion OR/OF 1A adding values 1A 199 1MCA dividing by 2 1O conclusion OR/OF 1A adding values 1MA dividing by 2 1CA simplification 1O conclusion OR/OF 1A adding values 1MA dividing by 2 1CA simplification 1O conclusion OR/OF 1A adding values 1MA dividing by 2 1CA simplification 1O conclusion	(4) [36]

QUESTION/VRAAG 5 [36 MARKS/PUNTE]			
Q/V	Solution/ <i>Oplossing</i>	Explanation/ <i>Verduideliking</i>	T/L
5.1.1	✓✓RT The Forum / <i>Die Forum</i>	2RT correct shop (2)	MP L1 E
5.1.2	SW ✓✓RT	2RT correct direction (2)	MP L2 E
5.1.3	✓RT $6,201 \text{ km} \times 50$ ✓MA = 310,05 km	1RT correct value- 6,201 1MA multiply by 50 laps (2)	M L1 E
5.1.4	Flamingo ✓✓RT	2RT correct road (2)	MP L1 E
5.1.5	Distance between A and B/ <i>Afstand tussen A en B</i> = 69 mm ✓A Actual distance/ <i>Werklike afstand</i> = 69 mm \times 13 500 ✓MCA = 931 500 mm = 0,9315 km ✓C Distance = Speed \times Time/ <i>Afstand = Spoed \times Tyd</i> ✓SF 0,9315 km = 204 km/h \times Time/ <i>Tyd</i> Time/ <i>tyd</i> = 0,9315 km \div 204 km/h ✓MCA = 0,004566176471 h ✓CA Time in min/ <i>Tyd in min</i> = 0,004566176471 h \times 60 = 0,2739705882 min ✓C	1A map distance 1MCA multiply by scale 1C convert to km 1SF substitute correct values 1MCA changing subject of formula 1CA simplification 1C convert to minutes. [Accept measurement from 67 mm to 71 mm. Allow ± 1 mm deviation from province measurement] NPR (7)	MP L3 D
5.1.6	✓A Agree. He will be facing West and that is where the sun sets. ✓✓O Stem saam. Hy sal in 'n westelike rigting kyk en dit is waar die son sak	1A agree 2O correct explanation (3)	MP L4 E

Q/V	Solution/ <i>Oplossing</i>	Explanation/ <i>Verduideliking</i>	T/L
5.2.1	<p>Start time/ <i>Begintyd</i> \checkmarkRT \checkmarkRT $23:28:54 - 00:01:35,490$ $23:27:18,51 \quad \checkmark$A</p>	<p>1RT correct value 1RT correct value 1A simplification</p>	M L2 M (3)
* 5.2.2	<p>1:29:08,289 Time in seconds/ <i>Tyd in sekondes</i>: \checkmarkC \checkmarkC $= (1 \times 60 \times 60) \text{ s} + (29 \times 60) \text{ s} + 8,289 \text{ s}$ $= 3\ 600 \text{ s} + 1\ 740 \text{ s} + 8,289 \text{ s}$ $= 5\ 348,289 \text{ s} \quad \checkmark$CA</p> <p>Average lap-time/ <i>Gemiddelde rondte tyd</i> $= 5\ 348,289 \text{ s} \div 50 \quad \checkmark$MCA $= 106,96578 \text{ seconds/sekondes} \quad \checkmark$CA</p> <p>INVALID/ <i>ONGELDIG</i> \checkmarkO</p> <p style="text-align: center;">OR/OF</p> <p>Total time \div number of laps = Ave time/ <i>Totale tyd \div getal rondtes = Gemiddelde tyd</i></p> <p>Total time = Ave time \times number of laps/ <i>Totale tyd = Gemiddelde tyd \times getal rondtes</i></p> $ \begin{aligned} &= 106 \text{ s} \times 50 && \checkmark \text{MCA} \\ &= 5\ 300 \text{ sec} \quad \checkmark \text{CA} \\ &\quad \checkmark \text{C} \quad \checkmark \text{C} \quad \checkmark \text{C} \\ &= 1 \text{ hour } 28 \text{ min } 20 \text{ sec} \end{aligned} $ <p>INVALID/ <i>ONGELDIG</i> \checkmarkO</p>	<p>1C converting hours to seconds 1C minutes to seconds 1CA simplification</p> <p>1MCA divide by laps 1CA simplification</p> <p>1O conclusion</p> <p style="text-align: center;">OR/OF</p> <p>1MCA multiply by laps 1CA simplification 1C correct 1 hour 1C correct 28 minutes 1C correct 20 seconds 1O conclusion</p>	M L4 D (6)
5.3.1	<p>Inside length/ <i>Binne lengte</i>: \checkmarkMA \checkmarkC \checkmarkRT $630 \text{ mm} - 2(25 \text{ mm} + 45 \text{ mm})$ $= 630 \text{ mm} - 140 \text{ mm}$ $= 490 \text{ mm} \quad \checkmark$CA</p> <p>Inside width/ <i>binne breedte</i>: $420 \text{ mm} - 2(25 \text{ mm} + 45 \text{ mm}) \quad \checkmark$MCA $= 420 \text{ mm} - 140 \text{ mm}$ $= 280 \text{ mm} \quad \checkmark$CA</p>	<p>1C conversion 1RT correct value - 45 mm 1MA subtracting from length 1CA inside length</p> <p>1MCA subtracting from width 1CA simplification</p>	M L3 M (6)

Q/V	Solution/<i>Oplossing</i>	Explanation/<i>Verduideliking</i>	T/L
5.3.2	<p>Lengthwise/ <i>lengtegewys</i>:</p> $490 \text{ mm} - 485 \text{ mm} = 5 \text{ mm}$ <p>VALID/ <i>GELDIG</i></p> <p style="text-align: center;">OR/OF</p> <p>Widthwise/ <i>breedtegewys</i>:</p> $280 \text{ mm} - 270 \text{ mm} = 10 \text{ mm}$ <p>VALID/ <i>GELDIG</i></p>	<p>CA from Q 5.3.1</p> <p>1 MA subtracting from 490 mm 1 CA simplification 1 O conclusion</p> <p>OR/OF</p> <p>1 MA subtracting from 280 mm 1 CA simplification 1 O conclusion</p>	<p>M L4 D</p> <p>(3)</p>
			[36]
		TOTAL/TOTAAL: 150	