



# 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**

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

**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.**

<b>QUESTION/VRAAG 1 [28 MARKS/PUNTE] Answer Only AO - full marks</b>			
<b>Q/V</b>	<b>Solution/Oplossing</b>	<b>Explanation/Verduideliking</b>	<b>T/L</b>
* 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 / <i>kleiner as</i>	2A correct choice (2)	P L1 E
1.2.2	down / <i>af</i> ✓✓ A	2A correct choice (2)	M L1 E
1.2.3	Two / <i>twee</i> ✓✓ 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 / <i>Verskil</i> = 27,85°C − (− 0,70°C) = 28,55°C ✓ A	1RT correct temperature 1MA subtracting − 0,70°C from 27,85°C 1A simplification Accept −28,55°C (3)	M L1 E
1.3.5	Djibouti/Djiboeti and/en Mauritius ✓A ✓A Mauritania/ <i>Mauritanië</i> and /en Tuvali / <i>Tuvalu</i> ✓ A	2A 1 <sup>st</sup> correct pair 1A 2 <sup>nd</sup> correct pair (3)	MP L1 E
		<b>[28]</b>	

QUESTION/VRAAG 2 [23 MARKS/PUNTE]			
Q/V	Solution/Oplossing	Explanation/Verduideliking	T/L
2.1.1	✓✓ RT Cleaning supplies/Skoonmaakmiddels	2RT correct product (2)	MP L2 E
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. (2)	MP L2 E
2.1.3	✓✓ A Dairy and cheese. / Suiwel en kaas	2A correct section (2)	MP L1 E
2.1.4	✓✓ A anticlockwise. / anti-kloksgewys	2A correct option (2)	MP L1 M
2.1.5	✓✓ O Any ONE of the following: <ul style="list-style-type: none"> <li>Encourages customers to make purchases.</li> <li>Pleasant environment – customers like to shop there</li> <li>To encourage customers to return to shop again</li> <li>Easy to find items/easy access/convenience</li> <li>User friendly</li> <li>Save time</li> </ul> <i>Enige EEN van die volgende:</i> <ul style="list-style-type: none"> <li><i>Dit moedig kliënte aan om te koop.</i></li> <li><i>Aangename omgewing – kliënte hou daarvan om daar te koop.</i></li> <li><i>Om kliënte aan te moedig om terug te keer na winkel vir aankope.</i></li> <li><i>Maklik om items te vind/maklik toeganklik/gerieflik</i></li> <li><i>Verbruikersvriendelik</i></li> <li><i>Bespaar tyd</i></li> </ul>	2O reason (2)	MP L4 M



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

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

(6)

Q/V	Solution/oplossing	Explanation/Verduideliking	T/L
3.2.1	12 ✓✓ A	2A correct number (2)	M L1 E
* 3.2.2	<p>Total cost (excl) / <i>Totale koste (uitsluitende)</i></p> <p>✓ MA ✓ MA  <math>= R125,80 + 4 \times R657,40 + R1\,250</math>  <math>= R4\,005,40</math> ✓ CA</p> <p>VAT/BTW  <math>= R4\,005,40 \times 15\%</math>  <math>= R600,81</math> ✓ MCA</p> <p>Cost (incl) / <i>Koste (ingesluit)</i>  <math>= R4\,005,40 + R600,81</math>  <math>= R4\,606,21</math> ✓ CA</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>OR</p> <p><i>Cost/Koste</i>  <math>= R4\,005,40 \times 1,15</math>  <math>= R4\,606,21</math></p> </div>	<p>1MA adding three costs  1MA multiplying by 4  1CA simplification</p> <p>1MCA VAT</p> <p>1CA simplification (5)</p>	M L2 M
		[27]	



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

Q/V	Solution/Oplissing	Explanation/Verduideliking	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> Height / <i>Hoogte</i></p> $= \frac{\check{\text{RT}} \quad 4,3 \text{ inches}}{0,0394 \text{ inches/mm}} \quad \check{\text{MA}}$ <p>= 109,1370558 mm ✓CA</p> <p>= 10,9 cm ✓C <b>OR</b> 10,914 cm <b>OR</b> 10,91 cm</p>	<p>1RT correct height 4,3 inches</p> <p>1MA dividing with 0,0394 inch</p> <p>1CA simplification in mm</p> <p>1C conversion from mm to cm <b>NPR</b></p> <p>(4)</p>	M L2 M
4.3.2	<p>Length / <i>Lengte</i></p> <p>= 12 cm + 5 cm ✓MA</p> <p>= 17 cm ✓A</p> <p>Number lengthwise / <i>Getal lengtegewys</i></p> <p>= 199 cm ÷ 17 cm ✓MCA</p> <p>= 11,70588235</p> <p>≈ 11 ✓CA</p> <p>But / <i>maar</i></p> <p>17 cm × 11 = 187 cm ✓MCA</p> <p>And/ <i>En</i> 199 cm – 187 cm</p> <p>= 12 cm ✓CA</p> <p>Number of mini aquariums / <i>Getal mini akwariums</i></p> <p>= 11 + 1</p> <p>= 12 ✓CA</p> <p><b>OR/OF</b></p>	<p>1MA adding length and space</p> <p>1A simplification</p> <p>1MCA dividing</p> <p>1CA simplification</p> <p>1MCA calculating space left</p> <p>1CA simplification</p> <p>1CA simplification <b>OR/OF</b></p>	MP L3 D

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

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

<b>QUESTION/VRAAG 5 [36 MARKS/PUNTE]</b>			
<b>Q/V</b>	<b>Solution/Oplissing</b>	<b>Explanation/Verduideliking</b>	<b>T/L</b>
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 km × 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 × 13 500 ✓MCA = 931 500 mm = 0,9315 km ✓C  Distance = Speed × Time/ <i>Afstand = Spoed × Tyd</i> ✓SF 0,9315 km = 204 km/h × Time/ <i>Tyd</i> Time/ <i>tyd</i> = 0,9315 km ÷ 204 km/h ✓MCA = 0,004566176471 h ✓CA  Time in min/ <i>Tyd in min</i> = 0,004566176471 h × 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. <b>[Accept measurement from 67 mm to 71 mm. Allow ± 1 mm deviation from province measurement]</b>  <b>NPR</b> (7)	MP L3 D
5.1.6	✓A Agree. He will be facing West and that is where the sun sets. <i>Stem saam. Hy sal in 'n westelike rigting kyk en dit is waar die son sak</i>	1A agree 2O correct explanation (3)	MP L4 E

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

Q/V	Solution/Oplissing	Explanation/Verduideliking	T/L
5.3.2	<p>Lengthwise/ <i>lengte</i>gewys:</p> <p style="text-align: center;">✓MA</p> <p>490 mm – 485 mm = 5 mm ✓CA</p> <p>VALID/ <i>GELDIG</i> ✓O</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>Widthwise/ <i>breedte</i>gewys:</p> <p style="text-align: center;">✓MA</p> <p>280 mm – 270 mm = 10 mm ✓CA</p> <p style="text-align: center;">✓O</p> <p>VALID/ <i>GELDIG</i></p>	<p><b>CA from Q 5.3.1</b></p> <p>1 MA subtracting from 490 mm</p> <p>1 CA simplification</p> <p>1 O conclusion</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>1 MA subtracting from 280 mm</p> <p>1 CA simplification</p> <p>1 O conclusion</p> <p style="text-align: right;">(3)</p>	M L4 D
		<b>[36]</b>	
		<b>TOTAL/TOTAAL: 150</b>	