



# basic education

Department:  
Basic Education  
**REPUBLIC OF SOUTH AFRICA**

## **NATIONAL SENIOR CERTIFICATE NASIONALE SENIOR SETIFIKAAT**

**GRADE/GRAAD 12**

**MATHEMATICAL LITERACY P1/  
WISKUNDIGE GELETTERDHEID VI**

**NOVEMBER 2019**

**MARKING GUIDELINES/NASIENRIGLYNE**

**MARKS/PUNTE: 150**



<b>Symbol/Kode</b>	<b>Explanation/Verduideliking</b>
<b>M</b>	Method/ <i>Metode</i>
<b>MA</b>	Method with accuracy/ <i>Metode met 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>S</b>	Simplification/ <i>Vereenvoudiging</i>
<b>RT</b>	Reading from a table/graph/document/diagram/ <i>Lees vanaf tabel/grafiek/dokument/diagram</i>
<b>SF</b>	Correct substitution in a formula/ <i>Korrekte vervanging in 'n formule</i>
<b>O</b>	Opinion/Explanation/ <i>Opinie/Verduideliking</i>
<b>P</b>	Penalty, e.g. for no units, incorrect rounding off, etc./ <i>Penalisasie, 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 penalisasie vir afronding nie</i>
<b>AO</b>	Answer only/ <i>Slegs antwoord</i>
<b>MCA</b>	Method with consistent accuracy/ <i>Metode met volgehoue akkuraatheid</i>
<b>RCA</b>	Rounding consistent with accuracy/ <i>Afronding met volgehoue akkuraatheid</i>

**This marking guideline consists of 18 pages and 2 pages of notes.  
Hierdie nasienriglyne bestaan uit 18 bladsye en 2 bladsye notas.**

**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.
- If the candidate presents any extra solution when reading from a graph, table, layout plan and map, then penalise for every extra item presented.
- The general principle of marking is that if a candidate makes one mistake and there is sound mathematics thereafter, the candidate loses one mark.

**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 nasiemriglyne toegepas, dit hou by die tweede berekeningsfout op.*
- *Wanneer 'n kandidaat aflesings vanaf 'n grafiek, tabel, uitlegplan en kaart geneem en ekstra antwoorde gee, penaliseer vir elke ekstra item.*
- *Die algemene beginsel van merk is as 'n leerder een fout maak verloor die leerder een punt.*

<b>QUESTION/VRAAG 1 [30 MARKS/PUNTE] AO</b>			
<b>Q/V</b>	<b>Solution/Oplissing</b>	<b>Explanation/Verduideliking</b>	<b>T&amp;L</b>
1.1.1	Numerical data/ <i>Numeriese data</i> ✓✓A	2A correct identification (2)	D L1
1.1.2	Modal allowance/ <i>Modale toelaag</i> = R1 780 ✓✓A	2A mode (2)	D L1
1.1.3	R1 715; R1 715; R1 695; R1 695; R1 695; R960; R405 ✓✓A	2A descending order Accept the names (2)	D L1
1.1.4	Increase in rand/ <i>Verhoging in rand</i> ✓RT R1 780 – R1 695 = R85,00 ✓A	1RT correct 2 values 1A simplification (2)	F L1
1.1.5	Pension allowances older than 75 ✓A <i>Staatsouderdomstoelae ouer as 75</i> War veteran allowances/ <i>Oorlogsveteranetoelae/Toelaes vir oorlogsveterane</i> ✓A	1A correct allowance 1A correct allowance (2)	D L1

Q/V	Solution/Oplossing	Explanation/Verduideliking	T&L
1.2.1	$1 \text{ kg} = 1\,000 \text{ g}$ $? = 400 \text{ g}$ $\therefore \text{Quantity/ massa in kg} = \frac{400 \text{ g}}{1000} \quad \checkmark \text{MA}$ $= 0,4 \text{ kg} \quad \checkmark \text{A}$ <p><b>OR/OF</b></p> $400 \text{ g} = \frac{400}{1\,000} \text{ kg} \quad \checkmark \text{MA}$ $= 0,4 \text{ kg} \quad \checkmark \text{A}$ <p><b>OR/OF</b></p> $400 \text{ g} = 400 \times 0,001 \text{ kg} \quad \checkmark \text{MA}$ $= 0,4 \text{ kg} \quad \checkmark \text{A}$	<p>1MA dividing by 1 000 1A amount in kg</p> <p><b>OR/OF</b></p> <p>1MA dividing by 1 000 1A amount in kg</p> <p><b>OR/OF</b></p> <p>1MA multiply by 0,001 1A amount in kg <b>NPU</b></p> <p style="text-align: right;">(2)</p>	<p>M L1</p>
1.2.2	$\text{Profit/Wins} = R14,30 - R10,99 \quad \checkmark \text{RT}$ $= R3,31 \quad \checkmark \text{CA}$	<p>1RT correct values 1M subtracting values 1CA simplification</p> <p style="text-align: right;">(3)</p>	<p>F L1</p>
1.2.3	<p>Number of packets/<i>Getal pakkies</i></p> $2,5 \text{ kg} \times \frac{1000}{250} \quad \checkmark \text{MA}$ $= 10 \text{ packets/pakkies} \quad \checkmark \text{CA}$ <p><b>OR/OF</b></p> $\frac{2,5 \text{ kg}}{0,25 \text{ kg}} \quad \checkmark \text{C}$ $= 10 \text{ packets} \quad \checkmark \text{CA}$ <p><b>OR/OF</b></p> $250 \text{ g} : 2,5 \text{ kg} \quad \checkmark \text{MA}$ $250 \text{ g} : 2500 \text{ g} \quad \checkmark \text{C}$ $1 : 10$ $= 10 \text{ packets} \quad \checkmark \text{CA}$	<p>1MA multiply by 1 000 1M dividing by 250g 1CA simplification</p> <p><b>OR/OF</b></p> <p>1C converting into kg 1M dividing by 0,25 kg 1CA simplification</p> <p><b>OR/OF</b></p> <p>1MA ratio concept 1C conversion to same unit 1CA simplification</p> <p style="text-align: right;">(3)</p>	<p>M L1</p>


Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L
1.2.4	Selling price/ <i>Verkoopsprys</i> $\frac{R29,20}{8} \checkmark MA$ $= R3,65 \checkmark CA$ <b>OR/OF</b> $\frac{2 \text{ kg}}{8} = 0,25 \text{ kg}$ $\therefore 2 \text{ kg} = R29,20$ $0,25 \text{ kg} = \frac{0,25 \times R29,20}{2} \checkmark MA$ $= R3,65 \checkmark CA$	1MA dividing correct value by 8 1CA simplification (only if dividing by 8 or correct value used)  <b>OR/OF</b> 1MA dividing by 2 AND multiply by 0,25 1CA simplification (2)	F L1
1.3.1 (a)	69 <b>OR/OF</b> 69% $\checkmark \checkmark A$	2A correct value (2)	D L1
1.3.1 (b)	80 <b>OR/OF</b> 80% $\checkmark \checkmark A$	2A correct value (2)	D L1
1.3.2	Difference/ <i>Verskil</i> $\checkmark RT$ $84\% - 64\%$ $= 20\% \checkmark CA$	1RT both correct values 1CA simplification (2)	D L1
1.4.1	16:00 <b>OR/OF</b> four o'clock in the afternoon/ <i>vier uur in die middag</i> <b>OR/OF</b> 4 pm $\checkmark MA$	2A correct value (2)	D L1

Q/V	Solution/Oplossing	Explanation/Verduideliking	T&L
1.4.2	Probability/ <i>Waarskynlikheid</i> = 20% <b>OR/OF</b> 0,2 <b>OR/OF</b> $\frac{20}{100}$ <b>OR/OF</b> $\frac{2}{10}$ <b>OR/OF</b> $\frac{1}{5}$ <b>OR/OF</b> unlikely/ <i>onwaarskynlik</i> <b>OR/OF</b> less likely/ <i>minder waarskynlik</i> ✓✓A	2A correct value/words     (2)	P L1
		[30]	



<b>QUESTION/VRAAG 2 [42 MARKS/PUNTE]</b>			
<b>Q/V</b>	<b>Solution/Oplissing</b>	<b>Explanation/Verduideliking</b>	<b>T&amp;L</b>
2.1.1	Market value/ <i>Markwaarde</i> = R944 630,00 Nine hundred and forty four thousand six hundred and thirty rand. ✓✓A <i>Negehonderd vier en veertig duisend ses honderd en dertig</i> <i>rand.</i>	2A correct value in words NPU (2)	F L1
2.1.2	Amount of VAT/ <i>Bedrag vir BTW</i> $R836,02 \times \frac{15}{100}$ ✓MA = R125,40 ✓CA  <p style="text-align: center;"><b>OR/OF</b></p> $R836,02 \times 1,15$ ✓MA = R961,42 $R961,42 - R836,02$ = R125,40 ✓CA	1MA correct value $\times \frac{15}{100}$ 1CA simplification  <p style="text-align: center;"><b>OR/OF</b></p> 1MA correct value $\times 1,15$ 1CA simplification (2)	F L1
2.1.3	Litres/liter <b>OR/OF</b> ℓ ✓✓A	2A correct unit Accept $dm^3$ (2)	F L1
2.1.4	Monthly sewer charge/ <i>Maandelikse rioolverwyderingskoste</i> A = R378,95 ✓✓A	2A correct charge (2)	F L1
2.1.5	Total water charge/ <i>Totale water koste</i> ✓MA ✓RT $B = (6 \times R8,28) + (4 \times R8,79) + (2 \times R15,00)$ = R49,68 + R35,16 + R30,00 ✓M = R114,84 ✓CA	1MA identify 6, 4, 2 1RT identify R8,28; R8,79; R15,00 1M adding (at least 2 correct values) 1CA simplification (4)	F L2
2.2.1	Inverse proportion/Omgekeerde eweredigheid ✓✓A  <p style="text-align: center;"><b>OR/OF</b></p> Indirect proportion / <i>Indirekte eweredigheid</i>	2A type of proportion (2)	F L1

Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L
2.2.2	6 ✓✓A	2A correct number (2)	F L1
2.2.3	Amount per person/Bedrag per persoon $\frac{\checkmark RT}{7 \checkmark MA} = \frac{R3\,000,00}{7 \checkmark MA}$ $= R428,57 \checkmark CA$	1RT correct cost (R3 000) 1MA dividing by 7 1CA simplification (3)	F L1
2.2.4 (a)	$\frac{R17\,000,00}{R500,00} \checkmark MA$ $= 34 \text{ months/maande} \checkmark CA$	1MA dividing by R500,00 1CA simplification <b>AO</b> (2)	F L1
2.2.4 (b)	Interest rate/Rentekoers $= 8,30\% \checkmark \checkmark A$	2A correct interest rate (2)	F L1
2.2.4 (c)	Interest for 1 year/Rente vir 1 jaar $= R17\,000,00 \times \frac{8,30}{100} \checkmark M$ <p>Interest for 3 years/Rente vir 3 jaar</p> $= R1\,411,00 \times 3$ $= R4\,233,00 \checkmark CA$ $= R4\,200,00 \checkmark R$ <p style="text-align: center;"><b>OR/OF</b></p> <p>Interest earned for 3 years /Rente verdien vir 3 jaar</p> $R17\,000,00 \times \frac{8,30}{100} \times 3 \checkmark M$ $= R4\,233,00 \checkmark CA$ $= R4\,200,00 \checkmark R$	<b>CA from Question 2.2.4 (b)</b> 1M interest calculation 1CA simplification 1R rounding <b>OR/OF</b> 1M interest calculation 1CA simplification 1R rounding (3)	F L2
2.2.4 (d)	Percentage point difference/Persentasiepunte verskil $8,46\% - 7,76\% \checkmark RT$ $= 0,7\% \checkmark CA$	1RT correct values 1CA simplification <b>AO</b> (2)	F L1

Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L
2.2.4 (e)	$\checkmark$ RT 18 months/ <i>maande</i> $\checkmark$ A $\checkmark$ A = 1 year and 6 months/ <i>1 jaar en 6 maande</i>	1RT reading from table 1A number of years 1A number of months <b>AO</b> (3)	F L1
2.3.1	$\checkmark$ RT R242 700 million/ <i>miljoen</i> $\checkmark$ A  <b>OR/OF</b> $\checkmark$ RT R242 700 000 000 $\checkmark$ A	1RT correct value (2 427) 1A number in millions <b>NPU</b> (2)	F L1
2.3.2	Total income received/ <i>Totale inkomste ontvang</i> : $1\ 370 + 242,7 + 180,3 + 31,5$ $\checkmark$ MA  $A = 1\ 824,5$ $\checkmark$ CA	1MA adding ALL correct values 1CA simplification <b>NPU</b> (wrote billions or rands) <b>AO</b> (2)	F L1
2.3.3	Other/ <i>Ander</i> $\checkmark$ RT $1\ 823,72 - (278,4 + 262,4 + 222,6 + 211,0 + 209,2 + 208,5 + 202,2 + 112,7)$ $\checkmark$ M  $B = 1\ 823,72 - 1\ 707$ $\checkmark$ MA $= 116,72$ $\checkmark$ CA	 1RT reading correct values 1M adding all the values 1MA subtracting from total 1CA value of B <b>NPU</b> (4)	F L2
2.3.4	Community development/ <i>Gemeenskapsontwikkeling</i> $\checkmark$ RT $= \frac{R208,5}{R1\ 823,72} \times 100\%$ $\checkmark$ M $= 11,43267607\%$ $\checkmark$ CA  <b>ACCEPT ONLY FOR AFRIKAANS CANDIDATES:</b> Social development/ <i>Maatskaplikesontwikkeling</i> $\checkmark$ RT $= \frac{R278,4}{R1\ 823,72} \times 100\%$ $\checkmark$ M $= 15,26550128\%$ $\checkmark$ CA	1RT both correct values 1M percentage calculation 1CA simplification  1RT both correct values 1M percentage calculation 1CA simplification <b>NPR</b> (3)	F L2
		<b>[42]</b>	



<b>QUESTION/VRAAG 3 [26 MARKS/PUNTE]</b>			
<b>Q/V</b>	<b>Solution/Oplissing</b>	<b>Explanation/Verduideliking</b>	<b>T&amp;L</b>
3.1.1	<p>Volume = It is the amount of solids or liquids an object can take/hold.  <i>Volume = Is die hoeveelheid vaste of vloeistowwe 'n voorwerp kan vat.</i> ✓✓A</p> <p><b>OR/OF</b></p> <p>Volume is the amount of space occupied by an object  <i>Volume is die hoeveelheid spasie opgeneem deur die voorwerp.</i></p>	<p>2A explanation</p> <p>(2)</p>	<p>M L1</p>
3.1.2	<p>Volume = side × side × height/<i>sy × sy × hoogte</i>                      ✓C                      = 0,5 m × 0,5 m × 0,08 m ✓SF                      = 0,02 m<sup>3</sup> ✓CA</p> <p><b>OR/OF</b></p> <p><math>\frac{20\ 000\text{ cm}^3}{1\ 000\ 000}</math> ✓SF                      50 cm × 50 cm × 8 cm                      = 0,02 m<sup>3</sup> ✓C                      ✓CA</p>	<p>1SF correct substitution                      1C conversion                      1CA simplification</p> <p><b>OR/OF</b></p> <p>1 SF correct substitution                      1C conversion                      1CA simplification</p> <p>(3)</p>	<p>M L2</p>
3.2.1	<p>Area of one block = length × breadth                      = 50 cm × 50 cm ✓SF                      = 2 500 cm<sup>2</sup>                      Area of 12 blocks = 0,25 m<sup>2</sup> × 12 ✓MA                      = 3 m<sup>2</sup> ✓CA</p> <p><b>OR/OF</b></p> <p>Area of one block = length × breadth                      = 0,5 m × 0,5 m ✓SF                      = 0,25 m<sup>2</sup>                      Area of 12 blocks = 0,25 m<sup>2</sup> × 12 ✓MA                      = 3 m<sup>2</sup> ✓CA</p> <p><b>OR/OF</b></p>	<p><b>CA from Question 3.1.2</b></p> <p>1SF substituting correct values                      1MA multiply by 12                      1CA answer in m<sup>2</sup></p> <p><b>OR/OF</b></p> <p>1SF substituting correct values                      1MA multiply by 12                      1CA answer in m<sup>2</sup></p> <p><b>OR/OF</b></p>	<p>M L2</p>

Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L
	<p>Area of 12 blocks = <math>12 \times (\text{side} \times \text{side})</math>  <i>Area van 12 blokke</i> = <math>12 \times (0,5 \text{ m} \times 0,5 \text{ m})</math> ✓SF                      = <math>12 \times 0,25 \text{ m}^2</math> ✓MA                      = <math>3 \text{ m}^2</math> ✓CA</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>Area of 12 blocks = <math>12 \times (\text{side} \times \text{side})</math>  <i>Area van 12 blokke</i> = <math>12 \times (50 \text{ cm} \times 50 \text{ cm})</math> ✓SF                      = <math>12 \times 2\,500 \text{ cm}^2</math> ✓MA                      = <math>3 \text{ m}^2</math> ✓CA</p>	<p>1SF substituting correct values                      1MA multiply by 12                      1CA answer in <math>\text{m}^2</math></p> <p style="text-align: center;"><b>OR/OF</b></p> <p>1SF substituting correct values                      1MA multiply by 12                      1CA answer in <math>\text{m}^2</math></p> <p style="text-align: right;">(3)</p>	
3.2.2	<p>Area of walkway                      ✓SF  <math>4,05 \text{ m} \times 1,45 \text{ m}</math>                      = <math>5,8725 \text{ m}^2</math> ✓A</p> <p>Area to be covered with pebbles                      = <math>5,8725 \text{ m}^2 - 3 \text{ m}^2</math> ✓MCA                      = <math>2,8725 \text{ m}^2</math> ✓CA</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>Area to be covered with pebbles                      ✓SF  <math>(4,05 \text{ m} \times 1,45 \text{ m}) - 3 \text{ m}^2</math>                      ✓A                      = <math>5,8725 \text{ m}^2 - 3 \text{ m}^2</math> ✓MCA                      = <math>2,8725 \text{ m}^2</math> ✓CA</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>Area of walkway                      ✓SF  <math>405 \text{ cm} \times 145 \text{ cm}</math>                      = <math>58\,725 \text{ cm}^2</math> ✓A</p> <p>Area to be covered with pebbles                      = <math>58\,725 \text{ cm}^2 - 30\,000 \text{ cm}^2</math> ✓MCA                      = <math>28\,725 \text{ cm}^2</math> ✓CA</p> <p style="text-align: center;"><b>OR/OF</b></p>	<p><b>CA from Question 3.2.1</b></p> <p>1SF substitution                      1A simplification</p> <p>1MCA subtracting area of blocks                      1CA simplification</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>1SF substitution                      1A simplification                      1MCA subtracting area of blocks                      1CA simplification</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>1SF substitution                      1A simplification</p> <p>1MCA subtracting area of blocks                      1CA simplification</p> <p style="text-align: center;"><b>OR/OF</b></p>	<p>M L3</p>




Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L
3.2.2	Area to be covered with pebbles $\begin{aligned} & \checkmark \text{SF} \\ & (405 \text{ cm} \times 145 \text{ cm}) - 30\,000 \text{ cm}^2 \\ & \checkmark \text{A} \\ & = 58\,725 \text{ cm}^2 - 30\,000 \text{ cm}^2 \checkmark \text{MCA} \\ & = 28\,725 \text{ cm}^2 \checkmark \text{CA} \end{aligned}$	1SF substitution 1A simplification 1MCA subtracting area of blocks 1CA simplification <b>NPR</b> (4)	
3.2.3	$\begin{aligned} & \frac{5,7 \text{ m}^2}{0,36 \text{ m}^2} \checkmark \text{MA} \\ & = 15,833 \checkmark \text{CA} \\ & = 16 \text{ bags of pebbles/sakkies klippies} \checkmark \text{RCA} \end{aligned}$	1MA dividing by 0,36 m <sup>2</sup> 1CA simplification 1RCA rounding (3)	M L2
3.3.1	Length of large window frame/ <i>Lengte van die groot vensterraam</i> $\begin{aligned} & \frac{890 \text{ mm}}{10} \checkmark \text{MA} \\ & = 89 \text{ cm} \checkmark \text{CA} \end{aligned}$	1MA dividing by 10 1CA simplification <b>AO</b> (2)	M L1
3.3.2	Perimeter/ <i>Omtrek</i> $\begin{aligned} & \checkmark \text{MA} \\ & = 18,5 \text{ cm} + 18,5 \text{ cm} + 18,5 \text{ cm} + 18,5 \text{ cm} \\ & = 74 \text{ cm} \checkmark \text{CA} \end{aligned}$ <p style="text-align: center;"><b>OR/OF</b></p> Perimeter/ <i>Omtrek</i> $\begin{aligned} & = 4 \times 18,5 \text{ cm} \checkmark \text{MA} \\ & = 74 \text{ cm} \checkmark \text{CA} \end{aligned}$ <p><b>AFRIKAANS ONLY OMIT SUB QUESTION 3.3.2 – UPSCALE FROM 24 TO 26</b></p>	1MA adding 4 sides 1CA simplification <p style="text-align: center;"><b>OR/OF</b></p> 1MA side multiplied by four 1CA simplification (2)	M L1
3.3.3	Diameter/ <i>Deursnee</i> = 1,85 cm × 2 = 3,7 cm $\checkmark \text{A}$ $\begin{aligned} & \frac{18,5 \text{ cm}}{3,7 \text{ cm}} \checkmark \text{M} \\ & = 5 \text{ beads} \checkmark \text{CA} \end{aligned}$	1A diameter 1M dividing by diameter 1CA simplification (3)	M L2

Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L
3.3.4	<p>✓MA  <math>2 \times 18,5 \text{ cm} = \frac{3}{4}</math> of the width of the large window/<i>van die wydte van die groter venster</i></p> <p>✓A  <math>37 \text{ cm} = \frac{3}{4}</math> of the width of the large window/<i>van die wydte van die groter venster</i></p> <p>Width of large window/<i>breedte van groot venster</i>  <math>= 37 \text{ cm} \times \frac{4}{3}</math> ✓MA  <math>= 49,33 \text{ cm}</math> ✓CA</p>	<p>1MA multiply 18,5 by 2</p> <p>1A simplification</p> <p>1MA multiply with inverse</p> <p>1CA simplification  <b>NPR</b></p> <p style="text-align: right;">(4)</p>	<p>M                      L2</p>
		[26]	




QUESTION/VRAAG 4 [24 MARKS/PUNTE]			
Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L
4.1.1	Camping, swimming, dining(eating) and checking-in (enquiries/registration/making payments).  <i>Kampeer, swem en eet en inboek (navrae/registrasie/betalings maak).</i> ✓✓✓✓ A	4A 4 correct activities  (4)	MP L1
4.1.2	Umngeni ✓✓ RT	2RT reading from map  (2)	MP L1
4.1.3	5 restaurants / restaurante ✓✓ RT	2RT reading from map  (2)	MP L1
4.1.4	Bar Scale/Staafskaal ✓✓ A	2A correct scale <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">Accept: Line scale/Lynskaal/ Balkskaal</div> (2)	MP L1
4.1.5	<p>✓A 4,2 cm = 4 km 1 cm = 0,9524 km ✓M ✓MA ∴ 10 cm = 9,524 km ≈ 10 km ✓CA</p> <p style="text-align: center;"><b>OR/OF</b></p> <p><math>\frac{10 \text{ cm}}{4,2 \text{ cm}} \times 4 \text{ km}</math> ✓M ✓MA ✓A = 9,524 km ≈ 10 km ✓CA</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>✓A 2,1 cm = 2 km 1 cm = 0,9524 km ✓M ✓MA ∴ 10 cm = 9,524 km ≈ 10 km ✓CA</p> <p style="text-align: center;"><b>OR/OF</b></p>	<p>1A measure bar scale 1M concept of scale 1MA multiply by scale</p> <p>1CA conversion</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>1A measure bar scale 1M concept of scale 1MA multiply by scale</p> <p>1CA conversion</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>1A measure bar scale 1M concept of scale 1MA multiply by scale 1CA conversion</p> <p style="text-align: center;"><b>OR/OF</b></p>	MP L2



Q/V	Solution/Oplossing	Explanation/Verduideliking	T&L
4.1.5	$\frac{10 \text{ cm}}{2,1 \text{ cm}} \times 2 \text{ km} \checkmark \text{M}$ $\checkmark \text{A}$ $= 9,524 \text{ km}$ $\approx 10 \text{ km} \checkmark \text{CA}$	1A measure bar scale  1M concept of scale 1MA multiply by scale  1CA conversion  <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px auto;">                         Accept 4,1 cm – 4,3 cm                          Accept 2 cm – 2,1 cm                     </div> <p style="text-align: right;">(4)</p>	
4.1.6	Total distance/Totale afstand $= 10 \text{ km} \times 2$ $= 20 \text{ km} \checkmark \text{MA}$ Time/tyd = $\frac{20 \text{ km}}{30 \text{ km/h}} \checkmark \text{SF}$  $\checkmark \text{C}$ Time/tyd = $0,6666666667 \text{ hours} \times 60$ $= 40 \text{ minutes/minute} \checkmark \text{CA}$  <p style="text-align: center;"><b>OR/OF</b></p> <div style="text-align: center;">  </div> $\text{Time/tyd} = \frac{10 \text{ km}}{30 \text{ km/h}} \checkmark \text{SF}$ $= 0,3333$ $\therefore \text{In minutes/minute} = 0,3333 \times 60 \checkmark \text{C}$ $= 20 \text{ minutes/minute} \checkmark \text{MA}$ $\therefore \text{Total time/Totale tyd} = 20 \times 2$ $= 40 \text{ minutes/minute} \checkmark \text{CA}$	1MA total distance (20 km)  1SF correct substitution  1C conversion 1CA simplification  <p style="text-align: center;"><b>OR/OF</b></p> 1SF correct substitution    1C conversion 1MA simplification  1CA simplification  <p style="text-align: right;">(4)</p>	MP L2
4.2.1	$2 \checkmark \checkmark \text{A}$	2A number of doors <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px auto;">                         Accept 3                     </div> <p style="text-align: right;">(2)</p>	MP L2

Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L
4.2.2	<p>✓RT                                  ✓RT                      Bedroom 1, Bathroom and Bedroom 2 /  <i>Slaapkamer 1, Badkamer en Slaapkamer 2</i></p> <p style="text-align: center;"><b>OR/OF</b></p> <p><b>ONLY AFRIKAANS CANDIDATES:</b>                      ✓RT                                  ✓RT  <i>Slaapkamer 1, Kombuis</i></p>	<p>1RT first room                      1RT other 2 rooms</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>1RT bedroom 1                      1RT kitchen</p> <p style="text-align: right;">(2)</p>	<p>MP                      L2</p>
4.2.3	<p><math>\frac{0}{2}</math> <b>OR/OF</b> 0 <b>OR/OF</b> 0%</p> <p><b>OR/OF</b>                                  ✓✓A</p> <p>Impossible/<i>Onmoontlik</i></p>	<p>2A probability</p> <p style="text-align: right;">(2)</p>	<p>P                      L2</p>
		<b>[24]</b>	



<b>QUESTION/VRAAG 5 [28 MARKS/PUNTE]</b>			
<b>Q/V</b>	<b>Solution/Oplissing</b>	<b>Explanation/Verduideliking</b>	<b>T&amp;L</b>
5.1.1	Questionnaires <b>OR</b> Interviews <b>OR</b> Survey <b>OR</b> Document analysis <b>OR</b> Research <b>OR</b> Observation  <i>Vraelys <b>OF</b> Onderhoud <b>OF</b> Meningspeiling (opname) <b>OF</b></i> <i>Dokument analise <b>OF</b> Navorsing <b>OF</b> Observeer ✓✓A</i>	2A means of collecting data  (2)	D L1
5.1.2	<b>% Yard trimmings/Werfsnoeisels</b> ✓MA $= 100\% - (3,4\% + 11,2\% + 49,7\% + 3,3\% + 9,0\%)$ $= 100\% - 76,6\%$ ✓M $= 23,4\%$ ✓CA	1MA adding all correct values 1M subtracting from 100% 1CA simplification <b>AO</b> (3)	D L2
5.1.3	<b>% Textiles/Tekstiele</b>  $= 11,2\% - (1,6\% + 2,3\% + 2,9\% + 1,7\%)$ $= 11,2\% - 8,5\%$ ✓MA $= 2,7\%$ ✓CA  	1MA subtracting from 11,2% 1CA simplification <b>AO</b> (2)	D L2
5.1.4	Tons of plastic/Ton plastiek ✓RT $91\,160\,000 \times \frac{3,4}{100}$ ✓MA $= 3\,099\,440$ tons/ton ✓CA  <b>OR/OF</b>  ✓RT $91,16 \times \frac{3,4}{100}$ ✓MA $= 3,09944$ million tons/ton ✓CA	1RT correct total 1MA multiply by 3,4% 1CA simplification  <b>OR/OF</b>  1RT correct total 1MA multiply by 3,4% 1CA simplification <b>NPR</b> (3)	D L2
5.1.5	Cans, pieces of a motor vehicles, household appliances; scrap metal <b>OR</b> any other product that includes metal /  <i>Blikke, dele van 'n motorfiets, afvalmetaal <b>OF</b> enige ander</i> <i>produkt wat metaal bevat. ✓✓A</i>	2A metal products that are recyclable  (2)	D L1



Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L
5.1.6	Stacked bar graph <b>OR</b> Compound bar graph <b>OR</b> Bar graph <i>Saamgestelde staaf grafiek <b>OF</b> Stapel/balk grafiek <b>OF</b> Staaf grafiek</i> ✓✓A	2A type of graph  (2)	D L1
5.1.7	Probability/Waarskynlikheid Other/Ander = 11,2% ✓RT ✓MA $1,7\% + 1,6\% + 2,3\% + 2,9\% = 8,5\%$ $\frac{8,5}{11,2}$ ✓M $= 0,7589285$ ✓CA  <b>OR/OF</b>  ✓A ✓RT $1 - \frac{2,7}{11,2}$ ✓MA $= 0,7589285$ ✓CA	1RT correct values 1MA adding all values  1M dividing 1CA simplification  <b>OR/OF</b> <b>CA from Question 5.1.3</b> 1RT correct values 1A for the number one 1MA subtracting 1CA simplification <b>NPR</b>  (4)	P L2
5.2.1	10 ✓✓A	2A correct number  (2)	D L1
5.2.2	Number of seats/setels ✓A $33 : 27$ ✓M  $= 11 : 9$ ✓CA	1A correct values 1M ratio in correct order  1CA simplified ratio Accept unit ratio or fractional form  (3)	D L1
5.2.3	National Freedom Party / NFP <i>Nasionale Vryheidsparty/NVP/NFP</i> ✓✓RT	2RT reading from table  (2)	D L1



Q/V	Solution/Oplossing	Explanation/Verduideliking	T&L																												
5.2.4	<table border="1"> <caption>NUMBER OF SEATS</caption> <thead> <tr> <th>Party</th> <th>Permanent</th> <th>Special</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>African National Congress</td> <td>33</td> <td>27</td> <td>60</td> </tr> <tr> <td>Democratic Alliance</td> <td>13 ✓A</td> <td>7 ✓A</td> <td>20</td> </tr> <tr> <td>Economic Freedom Fighters</td> <td>6</td> <td>1</td> <td>7</td> </tr> <tr> <td>Inkatha Freedom Party</td> <td>1</td> <td>0</td> <td>1</td> </tr> <tr> <td>National Freedom Party</td> <td>0</td> <td>1</td> <td>1</td> </tr> <tr> <td>United Democratic Movement</td> <td>1</td> <td>0</td> <td>1</td> </tr> </tbody> </table> <p style="text-align: center;"><b>POLITICAL PARTIES</b></p>	Party	Permanent	Special	Total	African National Congress	33	27	60	Democratic Alliance	13 ✓A	7 ✓A	20	Economic Freedom Fighters	6	1	7	Inkatha Freedom Party	1	0	1	National Freedom Party	0	1	1	United Democratic Movement	1	0	1		D L2
Party	Permanent	Special	Total																												
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	3A bars correctly drawn		(3)																												
			[28]																												
		<b>TOTAL/TOTAAL: 150</b>																													