



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

**SENIOR CERTIFICATE/SENIOR SERTIFIKAAT
NATIONAL SENIOR CERTIFICATE/
NASIONALE SENIOR SERTIFIKAAT**

GRADE/GRAAD 12

**MATHEMATICAL LITERACY P1/
WISKUNDIGE GELETTERDHEID VI**

NOVEMBER 2020

MARKING GUIDELINES/NASIENRIGLYNE

MARKS/PUNTE: 150

Symbol/Kode	Explanation/Verduideliking
M	Method/ <i>Metode</i>
MA	Method with accuracy/ <i>Metode met akkuraatheid</i>
CA	Consistent accuracy/ <i>Volgehoue akkuraatheid</i>
A	Accuracy/ <i>Akkuraatheid</i>
C	Conversion/ <i>Herleiding</i>
S	Simplification/ <i>Vereenvoudiging</i>
RT	Reading from a table/graph/document/diagram/ <i>Lees vanaf tabel/grafiek/dokument/diagram</i>
SF	Correct substitution in a formula/ <i>Korrekte vervanging in 'n formule</i>
O	Opinion/Explanation/ <i>Opinie/Verduideliking</i>
P	Penalty, e.g. for no units, incorrect rounding off, etc./ <i>Penalisasie, bv. vir geen eenhede, verkeerde afronding, ens.</i>
R	Rounding off/ <i>Afronding</i>
NPR	No penalty for rounding/ <i>Geen penalisasie vir afronding nie</i>
AO	Answer only/ <i>Slegs antwoord</i>
MCA	Method with consistent accuracy/ <i>Metode met volgehoue akkuraatheid</i>
RCA	Rounding consistent with accuracy/ <i>Afronding met volgehoue akkuraatheid</i>


**This marking guideline consists of 17 pages.
Hierdie nasienriglyne bestaan uit 17 bladsy.**

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.
- CA marks only apply if at least 1 correct value is used.
- If the candidate presents any extra solution when reading from a graph, table, layout plan and map, then penalise for every extra item presented.

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 op by die tweede berekeningsfout.
- CA geld alleenlik wanneer ten minste 1 korrekte waarde gebruik is.
- Wanneer 'n kandidaat aflesings vanaf 'n grafiek, tabel, uitlegplan en kaart geneem en ekstra antwoorde gee, penaliseer vir elke ekstra item.

QUESTION/VRAAG 1 [30 MARKS/PUNTE] ANSWER ONLY FULL MARKS			
Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L
1.1.1	Vertical bar graph/Vertikale staafgrafiek. Bar/Balk/Staaf, Column graph/Kolomgrafiek ✓✓A	2A bar graph (2)	D L1
1.1.2	✓MA A = R110 + R11 = R121 ✓CA	 1MA adding correct values 1CA Simplification (2)	F L1
1.1.3	✓MA B = R141 – R126 = R15 ✓CA	1MA subtracting correct values 1CA simplification (2)	F L1
1.1.4	Difference/Verskil R126 – R110 ✓MA = R16 ✓A	1MA subtract lowest from highest 1A simplification (2)	F L1
1.1.5	Increased Delivery fee/Verhoogde afleweringsooi = R10,00 × 6,32% ✓MA = R0,632 = R0,63 ✓A OR/OF = R10,00 × $\frac{6,32}{100}$ ✓M = R0,632 = R0,63 ✓A OR/OF	1MA calculating percentage 1A simplification OR/OF	F L1

Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L
1.1.5	<p>Increased delivery fee/<i>Verhoogde afleweringkoste</i> $= R10 \times 1,0632 \checkmark MA$ $= R10,632$ Increase in delivery fee/<i>Verhooging in afleweringkoste</i> $= R10,63 - R10,00$ $= R0,63 \checkmark A$</p>	<p>1MA calculating percentage 1A simplification (2)</p>	
1.2.1	2008 $\checkmark \checkmark RT$	<p>2RT reading correct year (2)</p>	D L1
1.2.2	<p>$\checkmark MA \checkmark RT$ Difference/<i>Verskil</i> = $R11,04 - R4,31$ $= R6,73 \checkmark CA$</p>	<p>1MA subtracting correct values 1RT correct values 1CA simplification (3)</p>	F L1
1.2.3	<p>$\checkmark MA$ $5,56 : 12,48 \checkmark RT$ $1 : 2,24 \text{ OR/OF } 0,45 : 1 \checkmark CA$</p>	<p>1MA concept of ratio in correct order 1RT correct values 1CA simplification (3)</p>	F L1
1.2.4	<p>Total/<i>Totaal</i> = $13,45 \times R4,00 \checkmark MA$ $= R53,80 \checkmark CA$</p> <p>OR/OF</p> <p>R : ℓ 4 : 1 $\checkmark MA$ 53,80 : 13,45 Total cost = $R53,80 \checkmark CA$</p>	<p>1MA multiplying correct values 1CA simplification (2)</p>	F L1
1.2.5	2007 $\checkmark \checkmark RT$	<p>2RT reading correct year (2)</p>	D L1


Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L
1.3.1	$\checkmark A$ $\checkmark A$ Strip Map (Chart)/Strookkaart $\checkmark\checkmark A$	2A strip map (chart) (2)	MP L1
1.3.2	Distance in metre/Afstand in meter $= 779 \times 1\,000 \checkmark MA$ $= 779\,000 \checkmark A$	1MA multiplying by 1 000 1A simplifying NPU (2)	M L1
1.3.3 (a)	$\checkmark A$ $\checkmark A$ Ladismith AND/EN Calitzdorp	1A correct town 1A correct town (2)	MP L1
1.3.3 (b)	The distance from Riversdale to Oudtshoorn/ <i>Afstand vanaf Riversdal na Oudtshoorn</i> $= 82\text{ km} + 45\text{ km} + 53\text{ km} \checkmark MA$ $= 180\text{ km} \checkmark CA$	1MA adding correct values 1CA simplification (2)	MP L1
		[30]	




QUESTION/VRAAG 2 [42 MARKS/PUNTE]			
Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L
2.1.1	R4 656,71 ✓✓A	2A correct balance (2)	F L1
2.1.2	Full date/Volle datum 1 February/Februarie 2019 ✓✓A 01/02/19 01/02/2019	2A full date (2)	F L1
2.1.3	R1 215,36 ✓✓A	2A correct amount (2)	F L1
2.1.4	R3 750,00 ✓✓A	2A correct amount (2)	F L1
2.1.5	FNB electronic payments/ENB elektroniese betaling ✓RT ✓RT R101,99 + R698,01 = R800,00 ✓A	1RT 1 st value correct 1RT 2 nd value correct 1A simplification AO (3)	F L1
2.1.6	Price excluding VAT/Prys BTW uitgesluit ✓RT = R4 000,00 × $\frac{100}{115}$ ✓MA = R3 478,26 ✓CA OR/OF Price excluding VAT/Prys BTW uitgesluit ✓RT $\frac{R4000}{1,15}$ ✓MA = R3 478,26 ✓CA OR/OF VAT amount/BTW bedrag = R4 000,00 × $\frac{15}{115}$ ✓MA = R521,74 Price excluding VAT/Prys BTW uitgesluit = R4 000 – R521,74 = R3 478,26 ✓CA (3)	1RT price of item 1MA calculating VAT 1CA price excluding VAT AO	F L2

Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L
2.2.1	South African Revenue Services/SARS Revenue Services ✓✓A <i>Suid Afrikaanse Inkomstedienste/SAID</i> <i>Inkomste(belasting)dienste</i>	2A name (2)	F L1
2.2.2	2 / TWO / TWEE ✓✓A OR/OF 7 / SEVEN / SEWE	2A correct bracket (2)	F L1
2.2.3	Annual tax before rebates/ <i>Jaarlikse inkomstebelasting voor belastingkortings</i> = R35 253 + 26% of taxable income above 195 850 = R35 253 + 26% × (R305 174,44 – R195 850) ✓SF = R35 253 + R28 424,35 ✓M = R63 677,35 ✓CA Monthly tax before rebates/ <i>Maandelikse inkomstebelasting voor belastingkortings</i> = R63 677,35 ÷ 12 ✓MCA = R5 306,45 ✓CA OR/OF Annual tax before rebates/ <i>Jaarlikse inkomstebelasting voor belastingkortings</i> = R532 041 + 45% of taxable income above 1 500 000 = R532 041 + 45% × (R3 662 093,28 – R1 500 000) ✓SF = R532 041 + R972 941,98 ✓M = R1 504 982,98 ✓CA Monthly tax before rebates/ <i>Maandelikse inkomstebelasting voor belastingkortings</i> = R1 504 982,98 ÷ 12 ✓MCA = R125 415,25 ✓CA	CA from question 2.2.2 1SF correct substitution 1M adding correct amounts 1CA simplification 1MCA dividing by 12 1CA simplification NPR (5)	F L3
2.2.4(a)	✓✓RT Primary rebate/ <i>Primêre korting</i> OR/OF R14 067,00	2RT reading from the table (2)	F L1
2.2.4(b)	3/THREE/DRIE ✓✓A	2A correct number of rebates (2)	F L1

Q/V	Solution/Oplossing	Explanation/Verduideliking	T&L
2.3.1	<p>Selling price of one photo/<i>Verkoopprys van een foto</i> \checkmarkMA $\frac{R500}{25}$ OR $\frac{R1000}{50}$ OR $\frac{R1600}{80}$ OR $\frac{R2500}{125}$ OR $\frac{R3000}{150}$ = R20 \checkmarkA OR/OF R4 000 \div 200 \checkmarkMA = R20 \checkmarkA</p>	<p>1MA dividing 1A simplification AO</p>	F L1
2.3.2	<p>Total income received/<i>Totale inkomste ontvang:</i> \checkmarkCA \checkmarkA Income = R20,00 \times n, where n = number of photos Income = R20,00 \times number of photos <i>Inkomste = R20,00 \times n, waar n = aantal foto's</i> <i>Inkomste = R20,00 \times aantal foto's</i></p>	<p>CA from Question 2.3.1 1CA R20,00 1A multiply by unknown</p>	F L2
2.3.3 (a)	<p>R5,00 $\checkmark\checkmark$A</p>	<p>2A variable cost NPU</p>	F L1
2.3.3 (b)	<p>A : Expenses = R1 125 + number of photos \times R5,00 A : <i>Uitgawes = R1 125 + aantal foto's \times R5,00</i> \checkmarkSF A = R1 125 + (80 \times R5,00) A = R1 125 + R400 \checkmarkMCA = R1 525 \checkmarkCA</p>	<p>1SF substituting value 1MCA adding values 1CA simplification AO</p>	F L2
2.3.4 (a)	<p>$\checkmark\checkmark$A Income and expenses of Ella's photography business <i>Inkomste en uitgawes van Ella se fotografiebesigheid</i></p>	<p>2A correct heading</p>	F L1
2.3.4 (b)	<p>X $\checkmark\checkmark$A</p>	<p>2A correct graph</p>	F L1
2.3.4 (c)	<p>75 photographs/<i>foto's</i> $\checkmark\checkmark$A</p>	<p>2A correct number of photographs</p>	F L1
		[42]	


QUESTION/VRAAG 3 [31 MARKS/PUNTE]			
Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L
3.1.1	<p><u>Legs of ottomans/Pote van ottomans:</u></p> <p>2 cubic/kubieke ottomans \times 4 legs/pote = 8 legs/pote \checkmarkA</p> <p>1 retangular/reghoekige ottoman \times 6 legs/pote = 6 legs/pote</p> <p>8 + 6 \checkmarkMA = 14 legs/pote \checkmarkCA</p>	<p>1A number of legs</p> <p>1MA adding 6 legs 1CA total number of legs AO</p> <p>(3)</p>	M L1
3.1.2	<p>Radius = $\frac{75 \text{ mm}}{2}$ \checkmarkMA = 37,5 mm / 3,75 cm \checkmarkA</p>	<p>1MA concept of radius</p> <p>1A simplification AO NPR</p> <p>(2)</p>	M L1
3.1.3	<p>Total height/Totale hoogte:</p> <p>50 cm + 12 cm \checkmarkC = 62cm \checkmarkA</p> <p style="text-align: center;">OR/OF</p> <p>Total height/Totale hoogte:</p> <p>= 120 mm + 500 mm = 620 mm \checkmarkA = 62 cm \checkmarkC</p>	<p style="text-align: center;"></p> <p>1C converting to cm 1A finding the height</p> <p>AO</p> <p>(2)</p>	M L1

Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L
M L2	<p>Area/Oppervlakte</p> $\begin{aligned} & \checkmark A \qquad \qquad \qquad \checkmark A \\ & (50\text{cm} \times 50\text{cm}) + (120\text{cm} \times 50\text{cm}) \\ & 2\,500\text{ cm}^2 + 6\,000\text{ cm}^2 \end{aligned}$ <p>Total Area/Totale Oppervlakte</p> $\begin{aligned} & (10 \times 2\,500\text{ cm}^2) + (2 \times 6\,000\text{ cm}^2) \checkmark M \\ & 25\,000\text{ cm}^2 + 12\,000\text{ cm}^2 \checkmark M \\ & 37\,000\text{ cm}^2 \checkmark CA \end{aligned}$ <p style="text-align: center;">OR/OF</p> <p>8 square sides/vierkantige sye $\times (50 \times 50)$ $= 20\,000\text{ cm}^2 \checkmark A$</p> <p>2 rectangular sides/reghoekige sye $\times (120 \times 50)$ $= 12\,000\text{ cm}^2 \checkmark A$</p> <p>2 square sides / vierkantige sye $\times (50 \times 50)$ $= 5\,000\text{ cm}^2 \checkmark A$</p> <p style="text-align: center;"></p> <p>Total area to be painted/Totale area wat geverf moet word:</p> $\begin{aligned} & = 20\,000\text{ cm}^2 + 12\,000\text{ cm}^2 + 5\,000\text{ cm}^2 \checkmark M \\ & = 37\,000\text{ cm}^2 \checkmark MA \end{aligned}$ <p style="text-align: center;">OR/OF</p> <p>Total perimeter/Totale Omtrek</p> $\begin{aligned} & \checkmark A \qquad \qquad \checkmark M \\ & = (50+50+50+50+50+50+50+50+120 +50+50+120)\text{ cm} \\ & = 740\text{ cm} \checkmark A \end{aligned}$ <p>Total area to be painted/Totale area wat geverf moet word:</p> $\begin{aligned} & = 740\text{ cm} \times 50\text{ cm} \checkmark MA \\ & = 37\,000\text{ cm}^2 \checkmark A \end{aligned}$	<p>1A area 1A area</p> <p>1M multiplying correct values 1M adding the two areas 1CA simplification</p> <p style="text-align: center;">OR/OF</p> <p>1A simplification</p> <p>1A simplification</p> <p>1A simplification</p> <p>1M adding all values 1MA finding total area</p> <p style="text-align: center;">OR/OF</p> <p>1A all correct values 1M adding correct values 1A simplification</p> <p>1MA multiplying correct values 1A simplification</p>	(5)


Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L
3.1.5	<p> $37\ 000\ \text{cm}^2 \div 10\ 000 = 3,7\ \text{m}^2 \checkmark\text{C}$ Total area to be painted/<i>Totale area wat geverf moet word</i> $= 3,7\ \text{m}^2 \times 2 \checkmark\text{M}$ $= 7,4\ \text{m}^2$ Spread rate/<i>sprydingskoers</i> $\frac{7,4\ \text{m}^2}{8\ \text{m}^2} \times 1\ 000 \checkmark\text{M}$ $= 925\ \text{millilitres/milliliter} \checkmark\text{CA}$ </p> <p style="text-align: center;">OR/OF</p> <p> Spread rate/<i>sprydingskoers</i> = $8 \times 10\ 000\ \text{cm}^2/\ell$ $= 80\ 000\ \text{cm}^2/\ell \checkmark\text{M}$ Amount of paint / <i>aantal verf in ℓ</i> = $\frac{37\ 000}{80\ 000} \checkmark\text{M}$ $= 0,4625$ Amount of paint for 1 coat / <i>aantal verf vir 1 deklaag in mℓ</i> $= 0,4625 \times 1\ 000$ $= 462,5 \checkmark\text{C}$ Amount of paint for 2 coats/ <i>aantal verf vir twee deklae</i> $= 462,5\ \text{mℓ} \times 2$ $= 925\ \text{mℓ} \checkmark\text{CA}$ </p> <p style="text-align: center;">OR/OF</p> <p> Total area to be painted/<i>Totale area wat geverf moet word:</i> $= 37\ 000\ \text{cm}^2 \div (100)^2 = 3,7\ \text{m}^2 \checkmark\text{C}$ Amount of paint for 1 coat/ <i>aantal ver vir 1 deklaag in ℓ</i> $= \frac{3,7}{8} \times 1 \checkmark\text{M}$ $= 0,4625\ \ell$ Total amount of paint/<i>Totale aantal verfl</i> $= 0,4625 \times 1000 \times 2 \checkmark\text{M}$ $= 925\ \text{mℓ} \checkmark\text{CA}$ </p> <p style="text-align: center;">OR/OF</p>	<p>CA Question 3.1.4 1C converting from cm^2 to m^2</p> <p>1M area for 2 coats</p> <p>1M divide by spread rate</p> <p>1CA answer in millilitres</p> <p style="text-align: center;">OR/OF</p> <p>1M multiplying by 8</p> <p>1M dividing by 80 000</p> <p>1C converting</p> <p>1CA simplification</p> <p style="text-align: center;">OR/OF</p> <p>1C conversion</p> <p>1M dividing by 8</p> <p>1M area of 2 coats</p> <p>1CA simplification</p> <p style="text-align: center;">OR/OF</p>	<p>M L2</p>

Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L
	<p> $8 \text{ m}^2 : 1 \ell$ $80\,000 \text{ cm}^2 : x \quad \checkmark C$ </p> <p>Amount of paint for 1 coat/ <i>aantal verf vir 1 deklaag</i></p> $x = \frac{1000 \times 37\,000}{80\,000} \quad \checkmark M$ $= 462,5 \text{ m}\ell$ <p>Amount of paint for 2 coats/ <i>aantal verf vir twee deklae</i></p> $= 462,5 \text{ m}\ell \times 2 \quad \checkmark M$ $= 925 \text{ m}\ell \quad \checkmark CA$ <p style="text-align: center;">OR/OF</p> <p>Total area to be painted/ <i>Totale area wat geverf moet word</i></p> $= 37\,000 \div 10\,000 \quad \checkmark C$ $= 3,7 \text{ m}^2 \times 2 \quad \checkmark M$ $= 7,4 \text{ m}^2$ <p>Spread rate/ <i>sprydingskoers</i> in mℓ/ ℓ</p> $1\,000 \div 8 \quad \checkmark M$ $= 125 \text{ m}\ell / \ell$ <p>Amount of paint/ <i>aantal verf</i></p> $125 \times 7,4 \text{ m}^2$ $= 925 \text{ m}\ell \quad \checkmark CA$	<p>1C conversion</p> <p>1M dividing by 80 000</p> <p>1M area of 2 coats 1CA simplification</p> <p style="text-align: center;">OR/OF</p> <p>1C conversion 1M area of 2 coats</p> <p>1M dividing by 8</p> <p>1CA simplification</p> <p style="text-align: right;">(4)</p>	
3.1.6	<p> Height/Hoogte = $\frac{\text{Volume}}{\pi \times (\text{radius})^2}$ $\checkmark C$ $= \frac{1\,000 \text{ cm}^3}{3,142 \times (6,5 \text{ cm})^2} \quad \checkmark SF$ $= 7,53298 \dots \text{ cm} \quad \checkmark CA$ </p>	<p>1C conversion from litres to cm^3</p> <p>1SF substitution of radius</p> <p>1CA simplification NPR</p> <p style="text-align: right;">(3)</p>	M L2
3.2.1	<p>a) W or White/<i>Wit</i> $\checkmark \checkmark RT$</p> <p>b) SB or Synthetic Brown leather/<i>Sintetiese bruin leer</i> $\checkmark \checkmark RT$</p>	<p>2RT correct code</p> <p>2RT correct code</p> <p style="text-align: right;">(4)</p>	P L1



Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L
3.2.2	$P(\text{not selecting red material}) = \frac{6}{9} \checkmark A$ $= \frac{2}{3} \checkmark CA$ <p style="text-align: center;">OR/OF</p> $P(\text{not selecting red material}) = 1 - \frac{3}{9}$ $= \frac{6}{9} \checkmark A$ $= \frac{2}{3} \checkmark CA$	<p>1A numerator 1A denominator 1CA simplification</p> <p style="text-align: right;">(3)</p>	<p>P L2</p>
3.3.1	$1 \text{ inch} = 153,6 \div 60 \checkmark M$ $= 2,56 \text{ cm} \checkmark A$ <p style="text-align: center;">OR/OF</p> <p>Alternative solution method:</p> <div style="text-align: center;">  </div> $\begin{array}{l} \text{inch} : \text{cm} \\ 60 : 153,6 \checkmark M \\ 1 : 2,56 \checkmark A \end{array}$ $1 \text{ inch} = 2,56 \text{ cm}$	<p>1M dividing by 60 1A simplification</p> <p style="text-align: right;">(2)</p>	<p>M L1</p>
3.3.2	$\begin{array}{l} \checkmark RT \\ \text{Perimeter/Omtrek} = 2 \times (5 \text{ m} + 153,6 \text{ cm}) \\ \checkmark C \\ = 2 \times (500 \text{ cm} + 153,6 \text{ cm}) \\ = 1\,307,2 \text{ cm} \checkmark CA \end{array}$ <p style="text-align: center;">OR/OF</p> $\begin{array}{l} \checkmark RT \\ \text{Perimeter/Omtrek} = 5 \text{ m} + 5 \text{ m} + 153,6 \text{ cm} + 153,6 \text{ cm} \\ \checkmark C \\ = (500 + 500 + 153,6 + 153,6) \text{ cm} \\ = 1\,307,2 \text{ cm} \checkmark CA \end{array}$	<p>1RT correct value – 153,6 cm 1C converting from 5 m to cm</p> <p>1CA simplification</p> <p style="text-align: center;">OR/OF</p> <p>1RT correct value – 153,6 cm 1C converting from 5 m to cm</p> <p>1CA simplification</p> <p style="text-align: right;">(3)</p>	<p>M L2</p>
		[31]	

QUESTION/VRAAG 4 [17 MARKS/PUNTE]			
Q/V	Solution/Oplossing	Explanation/Verduideliking	T&L
4.1.1	R46 ✓✓A	2A name of route (2)	MP L1
4.1.2	Number scale OR Numeric scale OR Ratio scale <i>Nommerskaal OF verhoudingskaal OF Getalskaal OF</i> Numeriese <i>OF</i> Getalle Skaal <i>OF</i> Syferskaal ✓✓ A	2A identifying the scale (2)	MP L1
4.1.3	South West OR SW OR West of South West OR WSW <i>Suidwes OF SW OF Wes van Suidwes OF WSW</i> ✓✓ A	2A general direction (2)	MP L1
4.1.4	A = 210 km – (62 km + 13 km + 82 km) ✓MA A = 53 km ✓CA	1MA subtracting correct values 1CA simplification (2)	MP L1
4.1.5	Ladismith ✓✓A	2A correct town (2)	MP L2
4.2.1	<p>Total length /Totale lengte ✓MA ✓MA = 20 cm + 229 cm + 20 cm + 20 cm + 229 cm + 20 cm = 538 cm ✓CA</p> <p style="text-align: center;">OR/OF</p> <p>Total length /Totale lengte ✓MA ✓MA 2 (20 cm + 229 cm + 20 cm) 2 × 269 cm = 538 cm ✓CA</p> <p style="text-align: center;">OR/OF</p> <p>Total length/Totale lengte ✓MA ✓MA = (20 cm × 4) + (229 cm × 2) = 80 cm + 458 cm = 538 cm ✓CA</p>	<p>1MA correct values (4×20) 1MA adding values (2×229) 1CA simplification</p> <p style="text-align: center;">OR/OF</p> <p>1MA correct values (4×20) 1MA adding values (2×229) 1CA simplification</p> <p style="text-align: center;">OR / OF</p> <p>1MA correct values (4×20) 1MA adding values (2×229) 1CA simplification (3)</p>	MP L2

Q/V	Solution/Oplossing	Explanation/Verduideliking	T&L
4.2.2	$D + 86 + 80 + 86 + D = 260 \checkmark \text{MA}$ $2D + 252 = 260 \checkmark \text{M}$ $2D = 260 - 252$ $2D = 8$ $D = 8 \div 2 \checkmark \text{M}$ $= 4 \text{ cm } \checkmark \text{CA}$ <p style="text-align: center;">OR/OF</p> <p>Length excluding D</p> $= (86 \text{ cm} \times 2) + (20 \text{ cm} \times 4)$ $= 172 \text{ cm} + 80 \text{ cm}$ $= 252 \text{ cm } \checkmark \text{MA}$ $\checkmark \text{M}$ $2D = 260 \text{ cm} - 252 \text{ cm}$ $D = 8 \text{ cm } \checkmark \text{M}$ $= 8 \text{ cm} \div 2$ $= 4 \text{ cm } \checkmark \text{CA}$	<p>1MA adding all values</p> <p>1M subtracting from 260</p> <p>1M dividing by 2</p> <p>1CA simplification</p> <p style="text-align: center;">OR/OF</p> <p>1MA calculating 252 1M subtracting from 260</p> <p>1M dividing by 2</p> <p>1CA simplification</p>	<p>MP L3</p> <p style="text-align: right;">(4)</p>
			[17]

QUESTION/VRAAG 5 [30 MARKS/PUNTE]			
Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L
5.1.1	TGA – team/span ✓✓RT	2RT correct tea (2)	D L1
5.1.2	Range/Omvang = 9,625 – 9,100 ✓RT = 0,525 ✓CA	1RT reading correct values 1CA concept of range (2)	D L1
5.1.3	Mean/Gemiddeld ✓RT = $\frac{9,100 + 9,250 + 9,300 + 8,650 + 9,100 + 9,050 + 8,750 + 9,050 + 8,300 + 9,200}{10}$ ✓M = 8,975 ✓CA	1RT correct values 1M concept of mean 1CA simplification NPR (3)	D L2
5.1.4	✓RT $A = 36,425 - (9,300 + 9,100 + 9,225)$ ✓M = 8,800 ✓A	1RT correct values 1M adding and subtracting 1A simplification (3)	D L1
5.1.5	36,425 ✓✓A	2A correct mode (2)	D L1
5.1.6	✓A $\frac{3}{5} \times 100\%$ ✓A = 60% ✓CA	1A numerator 1A denominator 1CA percentage NPR (3)	P L2
5.1.7	Quartile / Kwartiel 2 ✓RT = $\frac{9,375 + 9,400}{2}$ ✓M = 9,3875 ✓A	1RT arranging or correct values 1M dividing by 2 1A simplification NPR (3)	D L2

Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L
5.2.1	Fifty two million nine hundred and eighty two thousand. ✓✓A <i>Twee en vyftig miljoen negehonderd twee en tagtig duisend.</i>	2A amount in words (2)	D L1
5.2.2	Increase in population/ <i>Toename in bevolking(2015-2016)</i> ✓RT ✓M $56\,020\,718 - 54\,901\,943$ $= 1\,118\,775$ $\approx 1\,120\,000$ ✓R	1RT correct values 1M subtracting 1R correct rounding (3)	D L1
5.2.3	Annual population growth/ <i>Jaarlikse bevolkingstoename(2015)</i> $= \frac{54\,901\,943 - 53\,947\,998}{53\,947\,998} \times 100\%$ ✓SF $= 1,768\%$ $\approx 1,8\%$ ✓CA	1SF substituting 54 901 943 1SF substituting 53 947 998 1CA simplification NPR (3)	D L2



Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L
5.2.4	<p style="text-align: center;">Estimated total population and annual growth from 2013-2017</p> <p>1A – correctly plotted number of people 1CA – drawing of graph 1A – correctly plotted population growth 1CA – drawing of graph</p>		D L2
			(4)
			[30]
		TOTAL/TOTAAL: 150	