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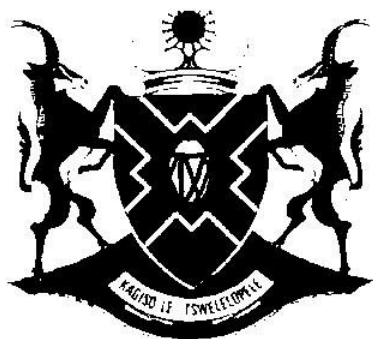
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# education

Department:  
Education  
North West Provincial Government  
**REPUBLIC OF SOUTH AFRICA**

## NATIONAL SENIOR CERTIFICATE/ NASIONALE SENIOR SERTIFIKAAT

**GRADE 12**

## MATHEMATICAL LITERACY SEPTEMBER 2024 MEMO

**MARKS/PUNTE: 150**

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

**These marking guidelines consist of 12 pages/  
Hierdie nasienriglyne bestaan uit 12 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 penalize 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.
- In opinion type questions marks will only be awarded if relevant calculations are shown.

**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 onafhandlike punt.
- In Opinie tipe vrae sal punte slegs toegeken word indien relefante berekeninge getoon word.

**QUESTION/VRAAG 1 [30 MARKS/PUNTE] Answer only AO – full marks**

Q/V	Solution/Oplissing	Explanation/Verduideliking	T/L
1.1.1	R533✓✓RT	2RT reading from the map/lees vanaf die kaart (2)	M&P TL1 E
1.1.2	B3✓✓A	1A B 1A 3 (2)	M&P TL 1 E
1.1.3	Bar scale/Staafskaal✓✓A <b>OR/OF</b> Graphic scale/line scale/Grafiese skaal/lynskaal	2A correct answer/korrekte antwoord (2)	M&P TL 1 E
1.1.4	Store museum/winkel museum✓✓RT	2RT reading from a map/lees vanaf die kaart (2)	M&P TL 1 E



Q/V	Solution/Oplissing	Explanation/Verduideliking	T/L
1.1.5	$\frac{76\,495}{1\,220\,813} \times 100\% \checkmark \text{MA}$ $= 6,265906... \% \checkmark \text{A}$ $= 6,3\% \checkmark \text{R}$	1MA calculating/ <i>bereken %</i> 1A correct answer/ <i>korrekte antw</i> 1R correct rounding/ <i>korrekte afronding</i>  (3)	M&P TL1 M
1.2.1	D✓✓A <b>OR</b> P = side + side + side/sy + sy + sy✓✓	2A correct formula/ <i>korrekte formule</i>  (2)	M TL 1 E
1.2.2	500 mm ÷ 1000✓C = 0,5 m✓A	1C convert to/ <i>skakel om na m</i> 1A answer/ <i>antwoord</i>  (2)	M TL 1 E
1.2.3	25 cm × 2✓MA = 50 cm✓A	1MA multiply by/ <i>vermenigvuldig met 2</i> 1A answer/ <i>antwoord</i>  (2)	M TL 1 E
1.3.1	Mass = 1 200 g ÷ 3✓MA = 400 g✓A	1MA dividing/ <i>deling</i> 1A answer/ <i>antwoord</i>  (2)	M TL 1 E
1.3.2	12,5 kg flour/meel✓✓RT <b>OR/OF</b> Mealie meal/ <i>mieliemeel</i> <b>OR/OF</b> Macaroni	2RT answer/ <i>antwoord</i> (Any one of the three option is correct/ <i>enige een van die drie opsies korrek</i> )  (2)	M TL 1 M
1.3.3	Mass/gewig = 9 000 g ÷ 4 ✓MA = 2 250 g ÷ 1 000 ✓ A = 2,25 kg ✓C  <b>OR</b>  9 000 g ÷ 1 000✓C = 9 kg ÷ 4✓ = 2,25 kg✓	1MA dividing by/ <i>deel deur 4</i> 1A answer/ <i>antwoord</i> 1C conversion  (3)	M TL1 M
1.4.1	E✓✓A	2A correct definition / <i>regte definisie</i>  (2)	M&P TL 1 E



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1.4.2	A✓✓A	2A Correct definition/ <i>regte definisie</i> (2)	M TL 1 E
1.4.3	B✓✓	2A Correct definition/ <i>regte definisie</i> (2)	P TL 1 E
		<b>[30]</b>	
<b>QUESTION/VRAAG 2 [31 MARKS/PUNTE]</b>			
Q/V	Solution/Oplissing	Explanation/Verduideliking	T/L
2.1.1	No of seats = $17 + 30 + 27 + 24 + 23 + 20 + 19 + 16$ ✓MA = 176 seats✓CA <b>OR</b> No of seats = $50 + 85 + 41$ ✓ = 176✓	1MA adding all values/ <i>tel al die getalle bymekaar</i> 1CA answer/ <i>antwoord</i>  <b>AO</b> (2)	M&P TL 1 E
2.1.2	Wheelchair seats/ <i>Rolstoelsitplekke</i> = 8✓A Non wheelchair seats/ <i>gewone sitplekke</i> = $176 - 8 = 168$ ✓CA 8 : 168✓MCA 1 : 21✓CA	<b>CA no of seats from/aantal sitplekke van 2.1.1</b> 1A number of wheelchair seats/ <i>aantal rolstoelsitplekke</i> 1CA number of non-wheelchair seats/ <i>gewone sitplekke</i> 1MCA correct order/ <i>regte volgorde</i> 1CA simplification/ <i>vereenvoudig</i> (4)	M&P TL 2 M
2.1.3	North East <b>OR</b> NE ✓✓A	2A correct compass direction/ <i>regte kompasrigting</i> (2)	M&P TL 2 E
2.1.4	✓✓ F14	1 A F 1A 14 (2)	M&P TL 2 E



2.1.5	<p>Mrs Brook will get up from her seat and turn towards the west/left ✓ A/Mev Brooks sal opstaan en wes/links draai</p> <p>She will walk till the passage, turn North/right/sy sal afloop in die paadjie en dan Noord/regs draai ✓ A</p> <p>and walk straight forward to the stage/ loop reguit vorentoe tot by die verhoog ✓ A</p> <p><b>OR/OF</b></p> <p>Walk towards the east/right, walk till passage then turn north towards the stage/loop oos in die rigting van die gangetjies draai Noord en loop tot by die verhoog.</p>	<p>1A turn left/east/draai links/oos</p> <p>1A turn right/north/draai regs/noord</p> <p>1A passageway to the stage/ gangetjie tot by verhoog (3)</p>	<p>M&amp;P TL 2 E</p>
2.1.6	<p><math>62,5\% \times 176 = 110</math> ✓ MA</p> <p><math>P = \frac{1}{110}</math> ✓ ✓ A <b>OR</b> 0,0091 ✓ ✓ <b>OR</b> 0,91% ✓ ✓</p>	<p><b>CA number of seats from 2.1.1</b></p> <p>1MA calculating/ bereken % of/ van 176</p> <p>1A numerator/teller</p> <p>1CA Denominator/noemer</p> <p><b>NPR</b></p> <p>(3)</p>	<p>P TL2 M</p>
2.2.1	<p>Floor plan is the aerial /top/bird's eye view of a structure/ vloerplan is die tekening van die uitleg van 'n gebou vanuit 'n voël-oog-uitsig/bo-aansig ✓ ✓ A</p>	<p>2A correct definition/regte definisie (2)</p>	<p>M&amp;P L1 E</p>
2.2.2	<p>13 doors/deure ✓ ✓ A</p> <p>(1 garage door/motorhuisdeur, 1 sliding door/ skuifdeur and/en 11 normal doors/gewone deure)</p>	<p>2A correct number of doors/korrekte aantal deure (2)</p>	<p>M&amp;P TL 2 E</p>
2.2.3	<p>A ✓ ✓ A</p> <p><b>OR/OF</b></p> <p>The porch is on the west elevation/die stoep is op die westelike aansig.</p>	<p>2A correct option/korrekte opsie (2)</p>	<p>M&amp;P TL 1 E</p>



2.2.4	<p>Actual length/<i>werklike</i> = <math>40 \text{ mm} \times 200</math>✓MA  <math>= 8\,000 \text{ mm}</math>✓C  <math>= 800 \text{ cm}</math>✓C</p> <p>Actual width / <i>werklike</i> = <math>32 \text{ mm} \times 200</math>  <math>= 6\,400 \text{ mm} = 640</math>  <math>\text{cm}</math>✓A</p> <p>Floor area/<i>vloeroppervlakte</i> = <math>800 \text{ cm} \times 640</math>  <math>\text{cm}</math>✓SF  <math>= 512\,000 \text{ cm}^2</math>✓CA</p> <p>Minimum area of the window/<i>minimum opp v venster</i>  <math>= 512\,000 \text{ cm}^2 \times 12,5\%</math>  <math>= 64\,000 \text{ cm}^2</math>✓CA</p> <p>Area of the window/<i>opp v venster</i>  <math>= \text{height}/h \times \text{width}/b</math>  <math>64\,000 \text{ cm}^2 = 256 \text{ cm} \times \text{width}/b</math>  <math>\text{Width}/\text{breedte} = 64\,000 \text{ cm}^2 \div 256 \text{ cm}</math>✓MCA  <math>= 250 \text{ cm}</math>✓CA</p>	<p>1MA using scale/<i>gebruik skaal</i>  1C conversion/<i>omskakeling</i>  1A length/<i>lengte</i></p> <p>1A width/<i>breedte</i>  1SF substitution/<i>vervang in formule</i>  1CA area of the room/<i>oppervlakte van kamer</i></p> <p>1CA area of the window/<i>oppervlakte van venster</i></p> <p>1MCA finding the width/<i>bereken die breedte</i>  1CA simplification/<i>vereenvoudig</i></p> <p>(9)</p>	M&P TL 3 D
		[31]	

**QUESTION/VRAAG 3 [39 MARKS/PUNTE]**

Q/V	Solution/Oplissing	Explanation/Verduideliking	T/L
3.1.1	<p>Perimeter/<i>omtrek</i>  <math>= (3,9 + 5,5 + 3 + 5,5 + 2,5) \text{ m}</math>✓MA  <math>= 20,4</math>✓CA <math>\text{m}</math>✓A</p>	<p>1MA adding all correct values/<i>korrekte waardes</i>  1CA simplification/<i>vereenvoudig</i>  1A correct unit/<i>korrekte eenheid</i></p> <p>(3)</p>	M TL 2 M





3.1.2	<p>Radius = <math>91,44 \text{ cm} \div 2 \checkmark \text{M}</math>  <math>= 45,72 \text{ cm} \checkmark \text{A}</math></p> <p><b>LSA</b> = <math>2 \times 3,142 \times r \times h</math>  <math>= 2 \times 3,142 \times 45,72 \text{ m} \times 30,48 \text{ m} \checkmark \text{SF}</math>  <math>= 8\,757,04055 \text{ cm}^2 \checkmark \text{CA}</math></p>	<p>1MA dividing by/deel deur 2  1A simplification/  vereenvoudig  1SF substitution into correct  formula/vervang in korrekte  formule  1CA simplification/  vereenvoudig  <b>NPR</b></p> <p>(4)</p>	<p>M  TL 2  M</p>
3.1.3	<p>Area of a circle /Oppervlakte van sirkel  <math>= 3,142 \times (45,72)^2 \checkmark \text{SF}</math>  <math>= 6\,567,780413 \text{ cm}^2 \checkmark \text{CA}</math>  <math>= 6\,567,780413 \div 10\,000/100^2</math>  <math>= 0,6567780413 \text{ m}^2 \checkmark \text{C}</math></p> <p>Area of a rectangle /Oppervlakte van 'n reghoek  <math>= 5,5 \text{ m} \times 3 \text{ m} \checkmark \text{SF}</math>  <math>= 16,5 \text{ m}^2 \checkmark \text{A}</math></p> <p>Area of a triangle /Oppervlakte van 'n driehoek  <math>= \frac{1}{2} \times 2,5 \text{ m} \times 3 \text{ m} \checkmark \text{SF}</math>  <math>= 3,75 \text{ m}^2 \checkmark \text{A}</math></p> <p>Shaded area/geskakeerde oppervlakte  <math>= 16,5 + 3,75 - 0,6567780413 \checkmark \text{MCA}</math>  <math>= 19,59 \dots \text{m}^2 \checkmark \text{CA}</math>  <math>\approx 20 \text{ m}^2</math></p>	<p><b>CA radius from/van 3.1.2</b></p> <p>1SF substitution/vervang  1CA  simplification/vereenvoudig</p> <p>1C conversion/omskakeling</p> <p>1SF substitution/vervang  1A  simplification/vereenvoudig</p> <p>1SF substitution/vervang  1A  simplification/vereenvoudig  1MCA adding and subtracting/  optel en afrek  1CA  simplification/vereenvoudig</p> <p>(9)</p>	<p>M  TL 3  D</p>
3.2.1	<p>Area of a brick = <math>0,215 \text{ m} \times 0,1025 \text{ m} \checkmark \text{SF}</math>  <math>= 0,0220375 \text{ m}^2 \checkmark \text{A}</math></p> <p>No of bricks = <math>\frac{20}{0,0220375} \checkmark \text{MCA}</math>  <math>= 907,5439592 \checkmark \text{CA}</math>  <math>= 908 \checkmark \text{R}</math></p>	<p>1SF substitution/vervang  1A  simplification/vereenvoudig  1MCA dividing/deling  1CA simplification/ vervang  1R rounded answer/afgeronde  antwoord</p> <p>(5)</p>	<p>M  TL 3  D</p>





3.2.2	<p>Mass in tons = <math>3,276 \text{ kg} \times 908 \checkmark \text{MCA}</math></p> <p><math>= 2\,974,608 \text{ kg} \checkmark \text{S}</math></p> <p><math>= 2\,974,608 \times 0,001 \checkmark \text{C}</math></p> <p><math>= 2,974608 \text{ ton} \checkmark \text{CA}</math></p> <p><b>OR/OF</b></p> <p>Mass = <math>\frac{2\,974,608}{1\,000}</math></p> <p>= 2,974608 ton</p>	<p><b>CA no of bricks from 3.2.1</b></p> <p>1MCA multiplying/ <i>vermenigvuldig</i></p> <p>1S simplification/<i>vereenvoudig</i></p> <p>1C conversion/<i>omskakel</i></p> <p>1CA answer/<i>antwoord</i></p> <p><b>NPR</b></p> <p>(4)</p>	<p>M</p> <p>TL 2</p> <p>M</p>
3.3.1	<p><math>1 \times 60 = 2 \times \mathbf{A} \checkmark \text{MA}</math></p> <p><math>\mathbf{A} = 60 \div 2</math></p> <p><math>= 30 \checkmark \text{A}</math></p> <p><math>\mathbf{B} = \frac{60}{15} = 4 \checkmark \text{A}</math></p>	<p>1MA multiplying/ <i>vermenigvuldig</i></p> <p>1A value of/<i>waarde vir</i> A</p> <p>1A value of/<i>waarde vir</i> B</p> <p><b>AO</b></p> <p>(3)</p>	<p>M</p> <p>TL 1</p> <p>E</p>
3.3.2	<p>Inverse proportion/<i>omgekeerde verhouding</i> <math>\checkmark \checkmark \text{A}</math></p> <p><b>OR/OF</b></p> <p>Indirect proportion/<i>indirekte eweredigheid</i> <math>\checkmark \checkmark</math></p>	<p>2A correct answer/<i>korrekte antwoord</i></p> <p>(2)</p>	<p>M</p> <p>TL 1</p> <p>E</p>
3.4.1	<p><math>60 \div 0,3937 \checkmark \text{MA}</math></p> <p><math>= 152,4003048 \text{ cm} \checkmark \text{C} \div 100</math></p> <p><math>= 1,52 \text{ m} \checkmark \text{C}</math></p> <p><b>OR/OF</b></p> <p><math>60 \div 0,3937 \div 100</math></p> <p><math>= 1,52 \text{ m}</math></p>	<p>1MA dividing/<i>deling</i></p> <p>1C conversion to cm/<i>skakel om in cm</i></p> <p>1R rounding/<i>afronding</i></p> <p>(3)</p>	<p>M</p> <p>TL2</p> <p>M</p>
3.4.2	<p>Nick's BMI = <math>\frac{56 \text{ kg}}{(1,65 \text{ m})^2} \checkmark \text{SF}</math></p> <p><math>= 20,57 \text{ kg/m}^2 \checkmark \text{A}</math></p> <p>Nicolene's BMI = <math>\frac{45 \text{ kg}}{(1,52 \text{ m})^2}</math></p> <p><math>= 19,48 \text{ kg/m}^2 \checkmark \text{CA}</math></p> <p>Difference = <math>20,57 - 19,48 \checkmark \text{MCA}</math></p> <p><math>= 1,09 \text{ kg/m}^2 \checkmark \text{CA}</math></p> <p>Ruth's statement is NOT correct <math>\checkmark \text{O}</math></p>	<p><b>CA height from 3.4.1</b></p> <p>1SF substitution/<i>vervang in formule</i></p> <p>1A simplification/<i>vereenvoudig</i></p> <p>1CA simplification/<i>vereenvoudig</i></p> <p>1MCA subtraction/<i>afrekkings</i></p> <p>1CA simplification/<i>vereenvoudig</i></p> <p>1O opinion/<i>opinie</i></p> <p>(6)</p>	<p>M</p> <p>TL 4</p> <p>M</p>

QUESTION/VRAAG 4 [22 MARKS/PUNTE]			
4.1.1	<p>Diameter /deursnee = <math>2,5 \times 2,54 \checkmark</math> MA = 6,35 cm <math>\checkmark</math> C</p> <p><math>r = \frac{6,35}{2} = 3,175 \text{ cm} \checkmark</math> A</p> <p><b>Volume of tin/can/van blikkie</b></p> <p>= <math>3,142 \times r^2 \times h</math></p> <p>= <math>(3,142) \times (3,175)^2 \checkmark</math> SF <math>\times (12,065) \checkmark</math> SF</p> <p>= <math>382,138651 \text{ cm}^3 \checkmark</math> CA</p> <p>= <math>382 \text{ cm}^3</math></p>	<p>1MA multiplying/ vermenigvuldig</p> <p>1C converted answer/omgeskakelde antwoord</p> <p>1A radius</p> <p>1SF substitution radius<sup>2</sup>/vervangings radius<sup>2</sup></p> <p>1SF substitution into formula/vervangings in formula</p> <p>1CA simplification/ vereenvoudiging</p> <p>(6)</p>	<p>M</p> <p>TL 2</p> <p>M</p>
4.1.2	<p>95% of volume</p> <p><math>382 \text{ cm}^3 = 382 \text{ ml} \checkmark</math> C</p> <p>= <math>\frac{95}{100} \times 382 \text{ ml} \checkmark</math> M</p> <p>= <math>362,9 \text{ ml} \checkmark</math> CA</p> <p>= <math>363 \text{ ml} \checkmark</math> R</p>	<p>1C conversion/omskakeling</p> <p>1MA</p> <p>multiplying/vermenigvuldig</p> <p>1CA simplification</p> <p>1R rounded answer.</p> <p>(4)</p>	<p>M</p> <p>TL 2</p> <p>E</p>
4.2	<p>Length of the table/tafel se lengte = 1,75 m</p> <p>50% of the length/50% van lengte = <math>1,75 \text{ m} \div 2</math> = <math>0,875 \text{ m} \checkmark</math> A</p> <p>If the scale of 1 : 10 is used/Skaal 1:10 word gebruik <math>\checkmark</math> M</p> <p>Length of model/lengte van model</p> <p>= <math>4,8 \text{ m} \div 10 \times 1</math></p> <p>= <math>0,48 \checkmark</math> CA</p> <p>0,48 will fit on the actual table/0,48 sal op die werklike tafel pas <math>\checkmark</math> O</p> <p>The scale of 1 : 10 will be suitable/die skaal 1:10 sal geskik wees. <math>\checkmark</math> O</p>	<p>1A calculating 50% of table size/ bereken 50% van die tafel se grootte</p> <p>1M using scale/gebruik skaal</p> <p>1CA calculating model length/ bereken die lengte van die model</p> <p>1O opinion/ opinie</p> <p>1O opinion/ opinie</p> <p>(5)</p>	<p>M&amp;P</p> <p>TL4</p> <p>D</p>
4.3.1	<p>Bus 1:</p> <p>Leave/Vertrek van Horison View: 6:02</p> <p>Arrive at/arriveer in Rosebank: 7:17</p> <p>Travel time/Reistyd</p> <p>= <math>7:17 - 6:02 \checkmark</math> RT <math>\checkmark</math> MCA</p> <p>= 1:15</p> <p>Take 1 hour 15 minutes/Sal 1 uur 15 minute reis. <math>\checkmark</math> CA</p>	<p>1RT correct times/korrekte tye</p> <p>1MCA subtract/aftrekking</p> <p>1CA answer/antwoord</p> <p>(3)</p> <p>AO</p>	<p>M</p> <p>TL 2</p> <p>E</p>

4.3.2	<p>Arrive at 7:17 then walks 15 minutes, start to work after 10 minutes of rest/<i>Arriveer 7:17, stap vir 15 minute en begin werk na 10 minute se rus.</i></p> <p><math>7:17 + 10 \text{ min} + 15 \text{ min} \checkmark \text{MA}</math></p> <p><math>= 7:42</math></p> <p>will work for 9hrs 45 min/<i>werk vir 9 uur 45 min</i></p> <p><math>= 7:42 + 9:45 \checkmark \text{MCA}</math></p> <p><math>= 17:27 \checkmark \text{A}</math></p> <p>No will not knock off at 17:00/<i>Nee hy sal nie klaar wees teen 17:00 nie \checkmark \text{O}</i></p>	<p>1MA add times to get starting time/<i>tel tyd om regte begin tyd te bereken</i></p> <p>1MCA add 9hr45min hours/<i>tel 9ur 45min ure by</i></p> <p>1CA correct end time/<i>regte eindtyd</i></p> <p>1O opinion/<i>opinie</i></p>	<p>M</p> <p>TL 4</p> <p>M</p>
		(4)	
		[22]	
<b>QUESTION/VRAAG 5 [28 MARKS/PUNTE]</b>			
Q/V	Solution/Oplossing	Explanation/Verduideliking	T/L
5.1.1	<p>SCALE /<i>SKAAL</i> 25 mm : 100 km</p> <p>Distance measured/<i>afstande gemeet</i> = 108 mm <math>\checkmark \text{C}</math></p> <p>Actual distance/<i>werklike afstand</i> = <math>108 \times \frac{100}{25}</math> km <math>\checkmark \text{CA}</math></p> <p><math>= 432 \text{ km} \checkmark \text{CA}</math></p> <p><b>OR/OF</b></p> <p>2,5 cm : 100 km</p> <p>10,8 cm : x km <math>\checkmark \text{C}</math></p> <p><math>10,8 \times \frac{100}{2,5} \text{ km} \checkmark \text{CA}</math></p> <p><math>= 432 \text{ km} \checkmark \text{CA}</math></p> <p><b>OR/OF</b></p> <p>25 mm : 100 km</p> <p>25 mm : 100 000 000 mm</p> <p>1 : 4 000 000 <math>\checkmark \text{A}</math></p> <p>Actual distance = <math>10,8 \text{ cm} \times 4\,000\,000 \checkmark \text{MCA}</math></p> <p><math>= 43\,200\,000 \text{ cm}</math></p> <p><math>= 432 \text{ km} \checkmark \text{CA}</math></p>	<p>1C conversion/<i>omskakeling</i></p> <p>1CA multiply with 100 and divide with 25/<i>vermenigvuldig met 100 en deel met 25</i></p> <p>1CA answer/<i>antwoord</i></p> <p><b>OR/OF</b></p> <p>1C conversion/<i>omskakeling</i></p> <p>1CA multiply with 100 and divide with 2,5/<i>vermenigvuldig met 100 en deel met 2,5</i></p> <p>1CA antwoord/<i>answer</i></p> <p><b>OR/OF</b></p> <p>1A number scale/<i>nommerskaal</i></p> <p>1MCA multiplying/<i>vermenigvuldiging</i></p> <p>1CA answer/<i>antwoord</i></p>	<p>M&amp;P</p> <p>TL 3</p> <p>M</p>
		(3)	





5.1.2	$T = \frac{432 \text{ km}}{120 \text{ km/h}} \checkmark \text{SF}$ $= 3,6 \text{ hours} \checkmark \text{A}$ $= 3 \text{ hour } 36 \text{ minutes} \checkmark \text{CA}$ $8 + 3 \text{ hours } / \text{ure } 36 \text{ minutes/minute} \checkmark \text{M}$ $= 11:36 \checkmark \text{C}$ <p>Yes, she will arrive before 12:00/midday Ja, sy arriveer voor 12:00 <math>\checkmark \text{O}</math></p>	<b>CA distance from/afstand van</b> <b>5.1.1</b> 1SF substitute into formula/vervang in formule 1A answer/antwoord 1C hours and minutes/ure en minute 1MCA adding time /tel tyd bymekaar 1CA answer/antwoord 1O opinion/ opinie (6)	M&P TL 4 M
5.2.1	$90 \% \text{ OR } 0,9 \text{ of roses/van die rose} = 12 + 15$ $90\% \text{ of the total number of roses} = 27$ $90\% \text{ van die totale aantal rose} = 27 \checkmark \text{M}$ $\text{Total roses/totaal rose} = \frac{27}{0,9} \checkmark \text{MA}$ $= 30 \text{ roses/rose} \checkmark \text{CA}$ <p><b>OR/OF</b>  <math display="block">27 \text{ roses/rose} : 90\%</math> <math display="block">x \text{ roses/rose} : 100\%</math> <math display="block">27 \times \frac{100}{90} \text{ roses}</math> <math display="block">= 30 \text{ roses/rose}</math></p>	1A Total of pink and red roses/ aantal pienk en rooi rose 1MA divide total by/deel totaal deur 90% 1CA answer/antwoord (3)	P TL 3 M
5.2.2	Different colors/Verskillende kleure: $30 - 27$ $= 3 \checkmark \text{CA}$ $P = \frac{3}{30} \checkmark \text{CA}$ $= 0,1 \checkmark \text{CA}$ <p>The statement is correct/Haar stelling is reg <math>\checkmark \text{O}</math></p>	<b>CA no of roses with/getal rose met 5.2.1</b> 1CA different coloured roses/verskillende kleur rose 1CA fraction/breuk 1CA simplification/vereenvoudig 1O opinion/ opinie (4)	P TL 4 E
5.3.1	$^{\circ}\text{F} - 32^{\circ} = \frac{9}{5} \times ^{\circ}\text{C}$ $275^{\circ} - 32^{\circ} = \frac{9}{5} \times ^{\circ}\text{C} \checkmark \text{SF}$ $243^{\circ} \checkmark \text{A} \times \frac{5}{9} = ^{\circ}\text{C} \checkmark \text{MCA}$ $135 ^{\circ}\text{C} \checkmark \text{CA}$	1SF substitution/vervanging 1A answer/antwoord 1MCA changing the subject/verander onderwerp 1CA simplification/vereenvoudig (4)	M TL 2 M





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5.3.2 (a)	<p>Length of the box/<i>lengte van kartonhouer</i>  <math>= 6 \times (7,5 \text{ cm} + 0,8 \text{ cm}) \checkmark \text{MA}</math>  <math>= 6 \times 8,3 \text{ cm}</math>  <math>= 49,8 \text{ cm} \checkmark \text{CA}</math></p> <p>Width of the box <math>= 3 \times (7,5 \text{ cm} + 0,8 \text{ cm})</math>  <math>= 3 \times 8,3</math>  <math>= 24,9 \text{ cm} \checkmark \text{CA}</math></p> <p>Height of the box <math>= 2 \times (8 \text{ cm}) \checkmark \text{A} + 0,8</math>  <math>= 2 \times 8,8</math>  <math>= 17,6 \text{ cm} \checkmark \text{CA}</math></p> <p>The dimensions of the box are:  <math>49,8 \text{ cm} \times 24,9 \text{ cm} \times 17,6 \text{ cm}</math></p>	<p>1MA multiplying number of jars by diameter and space/<i>vermenigvuldig aantal bottels met deursnee en spasie</i>  1CA length/<i>lengte</i></p> <p>1CA width/<i>breedte</i>  1A identifying the height of the bottle/<i>identifiseer hoogte van die bottel</i>  1CA height/<i>hoogte</i></p> <p>(5)</p>	M&P TL 3 D
5.3.2 (b)	<p>Volume of the box/<i>van karton houer</i>  <math>= 49,8 \text{ cm} \times 24,9 \text{ cm} \times 17,6 \text{ cm} \checkmark \text{SF}</math>  <math>= 21\,824,352 \text{ cm}^3 \checkmark \text{CA}</math>  <math>= 0,021824352 \text{ m}^3 \checkmark \text{C}</math></p> <p><b>OR/OF</b></p> <p>Volume of the box/<i>volume van karton houer</i>  <math>= 0,498 \text{ m} \times 0,249 \text{ m} \times 0,176 \text{ m}</math>  <math>= 0,021824352 \text{ m}^3</math></p>	<p><b>CA dimensions from/afmetings van 5.3.2(a)</b>  1SF substitution/<i>vervanging</i>  1CA simplification/<i>vereenvoudig</i>  1C conversion/<i>omskakeling</i></p> <p><b>OR/OF</b></p> <p>1C conversion/<i>omskakeling</i>  1SF substitution/<i>vervanging</i>  1CA simplification/<i>vereenvoudiging</i>  <b>NPR</b></p> <p>(3)</p>	M TL2 M
		[28]	
		<b>TOTAL/TOTAAL: 150</b>	

