education

Department:
Education
North West Provincial Government
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE/ *NASIONALE SENIOR SERTIFIKAAT*

GRADE 12/*GRAAD 12*

MATHEMATICAL LITERACY P2/ *WISKUNDIGE GELETTERDHEID V2*
SEPTEMBER 2025
MARKING GUIDELINES/*NASIENRIGLYNE*

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MARKS/*PUNTE*: 150

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

These marking guidelines consists of 10 pages./
Hierdie nasienriglyne bestaan uit 10 bladsye.

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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 penalize for every extra item presented.
- Rounding is an independent mark.
- General marking principle, if the candidate makes one mistake one mark is deducted.
- A conclusion mark can only be given if $\frac{1}{3}$ of the total marks for the sub-question have been awarded.
- 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.*
- *Wanneer 'n kandidaat aflesings vanaf 'n grafiek, tabel, uitlegplan en kaart geneem en ekstra antwoorde gee, penaliseer vir elke ekstra item.*
- *Afronding tel as 'n afsonderlike punt.*
- *Die algemene beginsel van nasien is, as 'n leerder een fout maak, word een punt afgetrek.*
- *'n Gevolgtrekkingspunt kan slegs gegee word indien $\frac{1}{3}$ van die totale punte vir die subvraag toegeken is.*
- *Geen penalisering vir afronding (NPR) nie as die eerste desimaal korrek is.*

QUESTION/*VRAAG* 1 [30 MARKS/*PUNTE*] Answer only AO – full marks			
Q/*V*	**Solution/*Oplossing***	**Explanation/*Verduideliking***	**T/L**
1.1.1	B✓✓A	2A correct definition/*korrekte definisie* (2)	M TL1 E
1.1.2	J✓✓A	2A correct definition/*korrekte definisie* (2)	M TL1 E
1.1.3	C✓✓A	2A correct definition/*korrekte definisie* (2)	M TL1 E
1.1.4	I✓✓A	2A correct definition/*korrekte definisie* (2)	M&P TL1 E

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Q/*V*	Solution/*Oplossing*	Explanation/*Verduideliking*	T/L
1.1.5	G✓✓A	2A correct definition/*korrekte definisie* (2)	M&P TL1 E
1.1.6	D✓✓A	2A correct definition/*korrekte definisie* (2)	P TL1 E
1.2			
1.2.1	Baseball/*basketbal* & tennis ✓✓RM	1RM first correct sport 1RM second correct sport *1RM vir elke korrekte sport* (2)	M&P TL1 E
1.2.2	Miller street/*straat*✓✓RM 7th Street/*straat* Huron street/*straat* Chopin street/*straat*	2RM choose any 2 streets / *2RM kies enige 2 strate* (2)	M&P TL1 E
1.2.3	G - proposed parking/*voorgestelde parkering*✓✓RM	2RM read from key/*lees af van gegewe sleutel* (2)	M&P TL1 E
1.2.4	B - amphitheater /*amfiteater*✓✓RM	2RM read from map/*lees af vanaf kaart* (2)	M&P TL1 E
1.2.5	50 mm✓✓M (Accept from/*aanvaar van* 49 – 51 mm)	2M measure correct values/*meet korrekte waardes* (2)	M&P TL1 E
1.3			
1.3.1	Clockwise/*kloksgewys* ✓✓RD	2RD read from diagram/*lees vanaf diagram* (2)	M&P TL1 E
1.3.2	2 barrel nuts and 2 assembly bolts = 4 *2 balie moere en 2 vasdraai boute = 4* ✓✓RD	2RD read from diagram/ *2RD lees vanaf diagram* (2)	M&P TL1 E
1.3.3	Large barrel nut/ *groot balie moere*✓✓RD	2RD read from diagram/ *2RD lees vanaf diagram* (2)	M&P TL1 E
1.3.4	Assembling a cot/*aanmekaar sit van bababed* Wooden baby cot/*hout bababedjie*✓✓A	2A for what is assembled/ *2A vir korrekte produk aanmekaar gesit.* (2)	M&P TL1 E
		[30]	

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QUESTION/*VRAAG* 2 [34 MARKS/*PUNTE*]			
Q/*V*	**Solution/*Oplossing***	**Explanation/*Verduideliking***	**T/L**
2.1.1	One unit on paper represents 125 unit on actual ground/*Een eenheid op papier verteenwoordig 125 eenhede op die grond.* ✓ ✓A	2A answer/*verduideliking* (2)	M&P L1 E
2.1.2	Bucket loader/*laaigraaf*: 4,6 m : *x* Scale/*skaal* 1 : 125 **OR/*OF*** 1 : 125 $\frac{4,6}{125}$✓M *x* : 4,6 m = 0,0368 ✓A = 0,0368 × 1000 =36,8 mm on the diagram✓A	1M divide bucket loader height with scale/*hoogte van laaigraf gedeel deur skaal* 1M multiply with 1000/*vermenigvuldig met 1000* 1A answer/*antwoord* (3)	M&P TL3 M
2.1.3	No/*Nee*✓A, the bridge clearance is 4,4 m but the bucket loader is 4,6 m/*die brug se hoogte is 4,4 m maar die laaigraaf is 4,6 m.*✓J	1A answer No/*antwoord Nee* 1J reason for not fitting/*rede waarom nie sal pas nie* (2)	M&P TL4 M
2.2			
2.2.1	Pniel✓✓RM	2RM reading from map/ *lees vanaf kaart* (2)	M&P TL1 E
2.2.2	Helshoogte Mountain Pass✓A	2RM reading from map/ *lees vanaf kaart.* (2)	M&P TL1 E
2.2.3	SW✓✓ and SE ✓M	2RM first correct direction/ *eerste rigting korrek* 1RM second correct direction/ *tweede rigting korrek* (3)	M&P TL2 E
2.2.4	R301 and/*en* R44 (accept/*aanvaar* R45) ✓✓RM	2RM reading from map/*aflees van kaart* (2)	M&P TL1 E
2.2.5	9: 35 + 2 hours/*uur* 50 minutes/*minute*✓M = 12:25✓A Claim not correct/*stelling onwaar*✓*O*	1M correct values/ *tel korrekte waardes bymekaar* 1A answer/*antwoord* 1O opinion/*mening* (3)	M&P TL4 E
2.3			
2.3.1	18 : 72 ✓✓RM 1:4 ✓S	1RT reading info from map 1 Ratio in correct order 1S simplification of ratio (3)	M&P L2 E

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Q/*V*	Solution/*Oplossing*	Explanation/*Verduideliking*	T/L
2.3.2	The 11th row/*11de ry* ✓✓A	2A correct answer/*regte antwoord* (2)	M&P L2 M
2.3.3	72 × 3✓MA = 216✓A Statement not true/*stelling onwaar*✓O **OR/*OF*** 72 +72 + 72= 216	1MA correct values/*korrekte waardes* 1A correct answer/*regte antwoord* 1O opinion/*opinie* (3)	M&P L4 M
2.4			
2.4.1 a)	A = 23:35 - 04:00✓M = 19 hours 35 min✓A (19,35 one mark only/*slegs een punt)*	1M subtract times/*trek tye af* 1A answer/*antwoord* (2)	M TL2 E
b)	**speed/*spoed*** $= \frac{\text{Distance}}{\text{time}} / \frac{afstand}{tyd}$ 35 ÷ 60 = 0,58333✓C **speed/*spoed*** $= \frac{1336}{19,58333}$ ✓SF S = 68,221 km/h ≈ 68 km/h✓R	1C converting min to hours/ *skakel min om in ure* 1SF substitute into formula/ *vervang in formule* 1R answer in km/h/*antwoord in km/h* **PENALTY IF WRONG UNIT/ *PENALISEER INDIEN VERKEERDE EENHEID GEBRUIK*** (3)	M TL3 M
		[32]	

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QUESTION/*VRAAG* 3 [32 MARKS/*PUNTE*]			
Q/*V*	**Solution/*Oplossing***	**Explanation/*Verduideliking***	**T/L**
3.1			
3.1.1	V = L × W × H = 1,82 × 1,54 ×0,67✓SF = 1,877876 m^3 = 1,88 m^3✓A✓U	1SF substitution/*vervanging* 1A answer/*antwoord* 1U correct unit/*korrekte eenheid* **NPR** (3)	M TL2 E
3.1.2	h = 73 ÷ 1000 = 0,073 m l = 222 ÷ 1000 = 0,222 m w = 106 ÷ 1000 = 0,106m ✓C V =L × W × H = 0,222 × 0,106 × 0,073 m =0,001717836 m^3 ✓CA $\frac{1.88}{0.001717836}$ ✓M = 1094,40 = 1094 bricks/*bakstene*✓R Statement correct/ *Stelling is waar*✓O	**CA from/*van* Q 3.1.1** 1C converting to m/ *omskakel in m* 1CA simplification/*vereenvoudig* 1M dividing/*deling* 1R round down/*afronding na onder* 1O opinion (5)	M L4 D
3.1.3	A = L x W = 0,222 × 0,106✓SF = 0,023532✓A = 0,024 m^2 ✓R	1SF substitute into formula/ *vervang in formule* 1A simplification/ *vereenvoudig* 1R rounding to three decimal places/*rond af tot drie desimale plekke* (3)	M L2 E
3.1.4	A = L x W = 20 × 1,33 m ✓SF = 26,6 m^2 ✓A $\frac{26,6}{0,024}$ ✓M = 1108,3 = 1109 bricks needed/*bakstene nodig*✓CA Have only 1093 (1094) bricks, therefor will short/ *Het slegs 1093 (1094) bakstene, kort dus nog* 1109 - 1093 = 16 bricks✓O/1 109 – 1 094 = 15 Do not have enough bricks in pile/*het nie genoeg bakstene in die palet nie.*✓O **OR/*of*** Area of 1 brick/*oppervlak van een baksteen* 0.023532 x 1093 =25.720476 m^2 A = l x w = 20 x 1.33 m	**CA from 3.1.3** 1SF substitution/*vervanging* 1A simplification/*vereenvoudig* 1M divide by area of brick/*deel deur oppervlakte van baksteen* 1CA simplification/ *vereenvoudig* 1O conclusion/*verduideliking* (5)	M L4 M

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	= 26.6 m^2 Not enough brick/*plaveiselstene nie genoeg* **OR/*OF*** 0,023532 × 1094 = 26,256 m^2 A = L × W = 20 ×1,33 = 26,6 m^2 Not enough brick/*plaveiselstene nie genoeg*		
3.2			
3.2.1	a) A = 0,8 m + 0,1 m✓M = 0,9 m✓A b) B = 0,7 × 2✓M = 1,4 m✓A	1M adding 0,1 m/*tel 0,1 by* 1A answer/*antwoord* (2) 1M multiply by 2/*vermenigvuldig met 2* 1A simplification/*vereenvoudig* (2)	M TL2 M
3.2.2	Length XY of kitchen = 1,4 + 0,7 + 0,9 + 0,8 + 0,2 ✓M = 4 m✓A	**CA with Q 3.2.1** 1M add all correct value/*tel korrekte waarde bymekaar* 1A correct answer/*korrekte antwoord* (2)	M TL2 E
3.2.3	a) Area of kitchen = L × W 14,8 m^2 = 4m × width✓SF Width = $\frac{14,8\ m^2}{4}$✓M = 3,7 m✓A b) 14,8 – 8,4 ✓M = 6,4 m^2✓A R238 × 6,4✓M = R1 523,20 Statement is correct/*Stelling korrek*✓O c) For breakage/*indien teëls sou breek.*✓✓	**CA with length of Q 3.2.2** 1SF substitute correct values/ *vervang korrekte waardes* 1M change formula/ *verander formule* 1A correct answer/*regte antwoord* (3) 1M subtract correct areas/ *trek korrekte oppervlakte af van mekaar* 1A answer/*antwoord* 1M multiply correct values/ *vermenigvuldig korrekte waardes* 1O opinion/*opinie* (4) 2O opinion/*opinie* (2)	M TL3 E F TL3 M TL4 M
		[32]	

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QUESTION/*VRAAG* 4 [30 MARKS/*PUNTE*]			
Q/*V*	**Solution/*Oplossing***	**Explanation/*Verduideliking***	**T/L**
4.1			
4.1.1	Volume = 2,5× 2,5 × 2 m✓SF = 12,5 m^3✓A = 12,5 kℓ✓C	1SF substitution/*vervanging* 1A answer/*antwoord* 1C converting to kℓ/*skakel om na kℓ* (3)	M TL2 E
4.1.2	65% of capacity/*65% van kapasiteit* = 0,65 ×12,5 kℓ✓M = 8,125 kℓ✓A **OR/*OF*** 0,35 × 12,5 kℓ✓M = 4,375 = 12,5 – 4,375 = 8,125 kℓ✓M Full output/*volle krag* = 3,6 kℓ/h $\frac{2}{3}$ of output/*van krag* $= \frac{2}{3} \times 3{,}6$ kℓ/h✓M = 2,4 kℓ/h✓CA Time taken to fill 65% = $\frac{8.125\ kl}{2.4\ kl/h}$✓M = 3,385 … hours✓CA = 3 hours + 0,385…× 60 = 3 hours 23,125 min ≈ 3 hours 24 min✓CA	1M calculating/*bereken* 65% 1A answer/*antwoord* 1M multiplication/ *vermenigvuldig* 1CA calculating output rate/ *bereken uitsetkrag* 1M finding time/*bereken tyd* 1CA time in hours/*bereken uur* 1CA time in hours and minutes/ *tyd in uur en minute* (7)	M TL3 D
4.2			
4.2.1	Daily water consumption/*daaglikse waterverbruik* = 40 × 90ℓ + 20 × 50 ℓ+30× 50ℓ + 50 x 5ℓ✓✓M = 6 350 ℓ✓S = 6,350 kℓ✓C Statement is correct/*Stelling is waar*✓O	1M multiplication from table/ *vermenigvuldig van tabel* 1S simplification/ *vereenvoudig* 1C conversion/*omskakeling* 1O opinion/*opinion* (4)	M TL4 E
4.2.2	Water needed for ten days/*water benodig vir 10 dae* = 6,35 kℓ × 10✓M = 63,5 kℓ = 63,5 m^3✓C 3,142 × (radius)^2 × 2 = 63,5 m^3✓SF	1M multiply by correct days/ *vermenigvuldig met korrekte dae* 1C conversion 1SF substitute into formula/ *vervang in formule*	M TL3 D

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	$(\text{radius})^2 = \frac{63{,}5\ m^3}{3{,}142 \times 2m}$✓M $(\text{radius})^2 = 10{,}1111111\ m^2$✓S Radius = $\sqrt{10{,}11111\ m^2}$ Radius = 3,17985 m Radius = 3,18 m✓R	1M change formula/ *verander in formule* 1S simplification/ *vereenvoudig* 1R correct rounding/*korrekte afronding* (6)	
4.2.3	$°\mathbf{F} = (°C \times \frac{9}{5}) + 32$✓F $°F = (34 \times \frac{9}{5}) + 32$✓SF = 93,2°F✓S = 93°F✓R	1F change formula/*verander formule* 1SF substitute/*vervang* 1S simplify/*vereenvoudig* 1R rounding/*afronding* (4)	M TL3 M
4.3			
4.3.1	8 windows/*vensters*✓✓RM	2RM reading from map/*aflees vanaf kaart* (2)	M&P TL2 E
4.3.2	Bathroom, door opens in front of bedroom door/ *badkamer deur maak oop verkeerde kant toe* ✓✓RM	2RM reading from map / *lees vanaf kaart* (2)	M&P TL2 E
4.3.3	a) Toilet ✓ b)Kitchen sink/*kombuiswasbak*✓ RM	2RM reading from map/*lees vanaf kaart* (2)	M&P TL2 E
4.3.4	North wall/*noordelike muur* ✓✓RM	2RM reading from map/ *lees vanaf kaart* (2)	M&P TL2 E
4.3.5	$\frac{2}{6} \times 100$ ✓✓A = 33,33% ✓CA	1A numerator/*teller* 1A denominator/*noemer* 1A correct percentage/*regte persentasie* (3)	P TL2 M
		[34]	
QUESTION/*VRAAG* 5 [23 MARKS/*PUNTE*]			
5.1			
5.1.1	Square, triangle or rectangle, oval, circle *Vierkant, driehoek en reghoek, ovaal, sirkel* ✓✓✓A	3A correct shapes/ *korrekte vorms* (3)	M TL2 E

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Q/*V*	Solution/*Oplossing*	Explanation/*Verduideliking*	T/L
5.1.2	1' = 2,54 cm Length/*lengte* = 4 x 8✓ = 40 inches/*duim*✓C Breadth/*breedte* = 6 x 5 = 30 inches/*duim*✓C The whole blanket/*die hele kombers* Length/*lengte* = 40 x 2,54 = 101,6 cm✓ Width/*breedte* 30 x 2,54 =76,2 cm✓	2C convert length and width in Inches/ *omskakel van lengte en breedte na duim* 2C correct length and width in cm/*korrekte lengte en breedte in cm* (5)	M TL3 D
5.1.3	L =101,6cm B =76.2 cm P = 2(101,6) +2(76,2) ✓✓SF = 203,2cm +152,4 cm✓S = 355,6 cm✓A	**CA from q 5.2.2** 2SF substitute values in formul a/*Vervang waardes in formule* 1S simplification/*vereenvoudig* 1A answer/*antwoord* (4)	M TL3 M
5.2			
5.2.1	Length = 4,1m ✓RM Width = 1,8 m✓RM	1RM read from diagram 1RM read from diagram (2)	M&P TL1 E
5.2.2	Diameter = 572 mm÷ 100✓C = 0,572 m✓A	1C conversion 1A answer (2)	M&P TL1 E
5.2.3	To ensure that each item packaged fit appropriately into the given container/ structure *Om seker te maak dat elke item deeglik binne in 'n gepaste houer sal pas ✓✓O*	2O opinion (2)	M&P TL 4 M
5.2.4	Number of oil drums: Length = $\frac{4,1}{0,572}$ = 7,1678 ≈ 7✓A Width = $\frac{1,8}{0,572}$ = 3,1468 ≈ 3✓A Lower shelf = 7 x 3 = 21✓A	1A length 1A width 1A lower shelf (3)	M&P TL 2 M
5.2.5	3 shelves 3 x 21✓✓M = 63 drums.✓A	2M multiplying correct values 1A correct answer (3)	M&P TL2 E
		[23]	
		TOTAL/*TOTAAL*:	**150**

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