



education

Department:
Education
North West Provincial Government
REPUBLIC OF SOUTH AFRICA

PROVINCIAL ASSESSMENT/ PROVINSIALE ASSESSERING

GRADE/GRAAD 11

MATHEMATICAL LITERACY P2 WISKUNDIGE GELETTERDHEID V2 NOVEMBER 2024 MARKING GUIDELINES/ NASIENRIGLYNE

MARKS/PUNTE: 100

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/document/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	
NP	
AO	

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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.
- 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 afsonderlike punt.
- Ten einde die verifikasie/gevolgtrekking punt toe te ken moes die kandidaat ten minste een punt gekry het in die berekening wat lei tot die finale gevolgtrekking.

QUESTION 1/VRAAG [19 MARKS/PUNTE] Answer only AO – full marks			
Q/V	Solution/Oplossing	Explanation/Verduideliking	T/L
1.1.1 (a)	Thermometer/Termometer✓✓A	2A answer/antwoord (2)	M L1 E
(b)	The degree of hotness or coldness of a substance/Die grade van hoe warm of koud 'n voorwerp is✓✓A	2A answer/antwoord (2)	M L1 E
(c)	43 °C✓✓A	2A answer/antwoord (2)	M L1 E
1.1.2	400 ml✓RT 0,4 litres/liters✓A	1RT correct reading/korrek geles 1CA conversion/herleiding (2)	M L1 E
1.1.3	Distance/Afstand = 9,7 cm – 2,9 cm✓RT = 6,8 cm✓CA = 68 mm✓C	1RT reading from the diagram / lees vanaf die diagram 1CA answer/antwoord 1C conversion/herleiding	M L1 M

	OR/OF Distance/ <i>Afstand</i> = 97 mm – 29 mm✓RT✓C = 68 mm✓CA	OR/OF 1RT reading values/ <i>lees waardes</i> 1C conversion/ <i>herleiding</i> 1CA answer// <i>antwoord</i> (3)	
1.2.1	Strip Chart/map/ <i>Strookkaart</i> ✓✓A	2A answer/ <i>antwoord</i> (2)	MP L1 E
1.2.2	Distance/ <i>Afstand</i> = 117 km✓✓RT OR/OF Distance/ <i>Afstand</i> = 557 km – 440 km✓RT = 117 km✓A	2RT reading from the map/ <i>lees vanaf kaart</i> OR/OF 1RT read and subtraction/ <i>lees en aftrek</i> 1A answer/ <i>antwoord</i> (2)	MP L1 M
1.2.3	Escourt✓✓RT	2RT reading from the map/ <i>lees Vanaf kaart</i> (2)	MP L1 E
1.2.4	5 towns/ <i>dorpe</i> ✓✓RT Accept 6 towns/aanvaar 6 dorpe	2RT reading from the map/ <i>lees Vanaf kaart</i> (2)	MP L1 E
		[19]	

QUESTION/VRAAG 2 [24 MARKS/PUNTE]			
2.1.1	Food/Kitchen/Kos/ <i>kombuis</i> ✓✓RT	2RT answer/ <i>antwoord</i> (2)	MP L1 E
2.1.2	South/ <i>Suid</i> (S) ✓A and/en East/ <i>Oos</i> (E)✓A OR/OF Southern/ <i>Suidelik</i> and/en Eastern/ <i>Oostelik</i>	1A South/ <i>Suid</i> 1A East/ <i>Oos</i> (2)	MP L2 E
2.1.3 (a)	37✓RT and/en 38✓RT	1RT room/ <i>kamer</i> 37 1RT room/ <i>kamer</i> 38 (2)	MP L2 E
(b)	The rooms are close to the corner✓A of Mimosa✓RT and Flower Street✓RT/ <i>Die klaskamers is naby die hoek✓A van Mimosa ✓RT en Flower Straat✓RT</i> OR/OF Adjacent/next to corner of Mimosa and Flower Street <i>Op/langs die hoek van Mimosa en Flower straat</i>	1A corner/adjacent/next to <i>/hoek van/langs aan</i> 1RT Mimosa 1RT Flower (3)	MP L3 M

2.1.4	Classroom/Klaskamer 14✓✓RT	2RT number/nommer 14 (2)	MP L2 M
2.1.5	Traffic congestion can be avoided when learners are picked up or dropped off/Verkeersopeenhoping kan verhoed word as leerders op gelaai of afgelaai word.✓✓O OR Learners might be crossing the road, and a two-way traffic can cause accidents/Leerders mag dalk die pad oorsteek, en tweerigting-verkeer kan ongelukke veroorsaak	2O reason/rede (2)	MP L4 M
2.1.6	$P = \frac{4\sqrt{A}}{38\sqrt{A}} \times 100$ = 10,52631579%✓CA = 10,526%✓R	1A numerator/teller 1A denominator/noemer 1CA simplification/vereenvoudiging 1R rounding/afroding (4)	P L3 D
2.2.1	12 km = average speed × 60 min✓SF 12 000 m ✓C = average speed × 60 min Average speed/gemiddelde spoed = 12 000 m ÷ 60 min✓M = 200 metres/minute✓CA OR/OF Average speed = distance ÷ time✓M 12 km ÷ 60 min✓SF = 12 000 m ÷ 60 min✓C = 200 m/min✓CA	1SF substitution/vervanging 1C conversion/herleiding 1M changing the subject of the formula/verander die onderwerp van die formule 1CA simplification/vereenvoudiging OR/OF 1M changing the subject of the formula/verander die onderwerp van die formule 1SF substitution/vervanging 1C conversion/herleiding 1CA simplification/vereenvoudiging (4)	MP L3 M M L2 M
2.2.2	200 m/min is too fast for walking and too slow for travelling by car or taxi./200 m/min is te vining om te loop en te stadig om met 'n motor of minibus te ry.✓✓O	2O reason/rede	MP L4
3.2.2	Number of pallets/hoeveelheid palette $8\,386 \div 594$ ✓MCA $14,11784513$ ✓CA Thus, the learner was cycling/running/Dus, moet die leerder fiets/loop✓O OR/OF Number of pallets/hoeveelheid palette Any other sensible answer/Elke sinvolle antwoord	CA number of bricks from/hoeveelheid stene van 3.2.1 1MCA dividing by/deël met 594 1CA number of pallets/hoeveelheid palette (3)	D
	= 8 385,048 ÷ 594✓MCA = 14,11624242✓CA = 15 pallets/palette ✓R	1R rounding up/rond op (3)	[24]

3.2.3	Mass/gewig = $8\,386 \times 2,230$ kg✓MCA	CA number of bricks from	
QUESTION/VRAAG 3 [20 MARKS/PUNTE]	$= 18\,700,78 \div 1\,000$	/hoeveelheid stene van 3.2.1	M
3.1.1	Area of 1 bicycle/oppervlakte van 1 fiets $= 180\text{ cm} \times 45,87\text{ cm}$ ✓R $= 1,8\text{ m} \times 0,45\text{ m}$ ✓C $= 0,81\text{ m}^2$ ✓CA OR/OF	1SF substitution/vervang 1CA simplification/herleiding 1CA verification/verifiëring 1C conversion/herleiding 1R rounding/afronding (4)	M M M
3.3.1	Area of 1 bicycle/oppervlakte van 1 fiets $= 180\text{ cm} \times 45,87\text{ cm}$ ✓SF As one quantity increases, the other one decreases/As een eenheid verhoog, neem die ander een af✓✓O	1SF substitution/vervang 1CA simplification/herleiding 2O explanation/verduidelikking 1C conversion/herleiding (3)	M L1 E
3.3.2	Number of days = 30 ✓RT ÷ number of people✓A /Hoeveelheid dae = $30 \div \text{hoeveelheid mense}$	1RT 30 1A divided by number of people/verdeel met CA from/vanaf 3.1.1 1MCA adding additional space OR/OF 1RT 30 1A simplification/vereenvoudiging 1MCA multiplying by/maal by number of people hoeveelheid dae maal met hoeveelheid mense 1O opinion/opinie (2)	M L2 M L4 M
3.1.2	Total floor area/Totale vloer oppervlakte $= 0,81\text{ m}^2 + 0,5\text{ m}^2$ ✓MCA OR/OF $= 1,31\text{ m}^2$ ✓CA Number of days × number of people✓ = 30 ✓ Hoeveelheid dae × hoeveelheid mense = 30 $127\text{ bicycles/fietse} \times 1,31\text{ m}^2$ ✓MCA $= 166,37\text{ m}^2$ The statement is correct/Die stelling is korrek.✓O	CA formula from/vanaf 3.3.2 1MCA multiplying/trek af 8 vermenigvuldig 1A number of bricks/ hoeveelheid stene (2) 1MCA increase percentage/ verhoogde persentasie 1CA simplification/vereenvoudiging 2A direction/rigting (5) (2)	M M E D
3.3.3	1 m^2 need/benodig 48 bricks/stene $166,37\text{ m}^2$ needs/benodig ? Number of bricks/Hoeveelheid stene $= 48 \times 166,37$ ✓MA Accept 4 days $= 7\,985,76$ ✓A Increase by 5%/verhoog met 5% $= 7\,985,76 \times 1,05$ ✓MCA OR/OF 105% $= 8\,385,048$ ✓CA	CA formula from/vanaf 3.3.2 1MCA multiplying/trek af 8 vermenigvuldig 1A number of bricks/ hoeveelheid stene (2) 1MCA increase percentage/ verhoogde persentasie 1CA simplification/vereenvoudiging 2A direction/rigting (5) (2)	M M E D
QUESTION/VRAAG 4 [31 MARKS/PUNTE]	Solution/Oplissing	Explanation/Verduideliking	T/L
4.1.1	Anti-clockwise/Anti-kloksgewys OR/OF Left/Links✓✓A	2A direction/rigting (5) (2)	MP L1 E
4.1.2	Diagram 3✓✓A	2A correct/korrekte diagram (2)	MP L2 E
4.1.3	$1,55\text{ m} = \text{diagram height/hoogte} \times 25$ Diagram height/hoogte = $1,55\text{ m} \div 25$ ✓MA $= 0,062\text{ m}$ ✓A $= 6,2\text{ cm}$ ✓C OR/OF $1,55\text{ m} = 155\text{ cm}$ ✓C $155\text{ cm} \div 25$ ✓MA $= 6,2\text{ cm}$ ✓A	1MA divide by scale/deël met skaal 1A length/lengte in m 1C conversion/herleiding OR/OF 1C conversion/herleiding 1MA dividing by scale/deël met skaal 1A length/lengte (3)	MP L2 M

4.2.1	Space occupied by a 3D object/ <i>Spasie wat deur 'n 3D voorwerp opgeneem word</i> ✓✓A	2A answer/antwoord (2)	M L1 E
4.2.2	Volume = $340 \text{ mm} \times 325 \text{ mm} \times 180 \text{ mm}$✓SF $= 0,34 \text{ m} \times 0,325 \text{ m} \times 0,18 \text{ m}$✓C $= 0,01989 \text{ m}^3$✓CA OR/OF Volume of the box/<i>volume van die boks</i> $= 340 \text{ mm} \times 325 \text{ mm} \times 180 \text{ mm}$✓SF $= 19\,890\,000 \text{ mm}^3 \div 1\,000\,000\,000$✓CA $= 0,01989 \text{ m}^3$✓C	1C conversion/<i>herleiding</i> 1SF substitution/<i>vervanging</i> 1CA simplification/<i>vereenvoudiging</i> NPR (3)	M L2 M
4.2.3	Number of boxes/<i>Hoeveelheid bokse</i>: Length wise/<i>Lengte</i> = $1\,700 \text{ mm} \div 340 \text{ mm}$✓MA $= 5$✓A Width wise/<i>Breedte</i> = $1\,490 \text{ mm} \div 325 \text{ mm}$ $= 4,584615385$ $= 4$✓A Height wise/<i>Hoogte</i> = $1\,200 \text{ mm} \div 180 \text{ mm}$ $= 6,6666667$ $= 6$✓A Total/<i>Totaal</i> = $5 \times 4 \times 6$✓MCA $= 120 \text{ boxes/bokse}$✓CA OR/OF Length wise/<i>lengte</i>: $1,7 \text{ m} \div 0,34 \text{ m}$✓MA = 5✓A Width wise/<i>breedte</i>: $1,49 \text{ m} \div 0,325 \text{ m} = 4,584615...$ $= 4$✓A Height wise/<i>hoogte</i>: $1,2 \text{ m} \div 0,18 \text{ m} = 6,666...$ $= 6$✓A Total/<i>totaal</i> = $5 \times 4 \times 6$✓MCA $= 120 \text{ boxes}$✓CA	1MA dividing/<i>deë</i>/ 1A answer/antwoord 1A number width wise/<i>hoeveelheid in breedte</i> 1A number height wise/<i>hoeveelheid in hoogte</i> 1MCA multiplying/<i>vermenigvuldig</i> 1CA number of boxes/<i>hoeveelheid bokse</i> (6)	MP L3 D
4.2.4	30 June from 14:50 to 24:00 = 9 hours 10 min✓A 30 Junie van 14:50 tot 24:00 = 9 uur 10 min 1 July = 24 hours 1 Julie = 24 uur 2 July from 00:00 to 8:15 = 8 h 15 min } ✓A 2 Julie van 00:00 tot 8:15 = 8 h 15 min } Total elapsed time = $9\text{h}10 + 24\text{h}00 + 8\text{h}15$ $= 41 \text{ hours } 25 \text{ min}$✓CA <i>Totale tyd verloop = 41 uur 25 min</i> This is within the 48-hour service✓O <i>Dit is binne die 48-uur diens</i> OR/OF	1A time 30 June/<i>tyd 30 Junie</i> 1A time 1 and 2 July/<i>tyd 1 en 2 Julie</i> 1CA adding time/<i>tel tyd bymekaar</i> 1O opinion/<i>opinie</i> OR/OF	M L4 D

	30 June from 14:50 To 1 July 14:50 = 24 hours/ first day✓ A <i>/30 Junie van 14:50</i> <i>Tot 1 Julie 14:50 = 24 uur/ dag 1</i> To 2 July 14:50 = 48 hours/second day✓ A <i>Tot 2 Julie 14:50 = 48 ure / dag 2</i> But 2 July 8:15 is before 48 hours✓ A <i>Maar 2 Julie 8:15 is voor 48 uur</i> It is within 48 hours✓ O <i>Dit is binne 48 uur</i>	1A 1st day/dag 1 1A 2nd day/dag 2 1A conclusion/gevolgtrekking 1O conclusion/gevolgtrekking (4)	
4.3.1	Body Mass Index/Liggaamsmassa-indeks✓✓ ^A	2A answer/antwoord (2)	M L1 E
4.3.2	Underweight/Ondergewig✓✓RT	2RT answer/antwoord (2)	M L2 E
4.3.3	$18,2 \text{ kg/m}^2 = \text{mass/gewig} \div (1,56 \text{ m})^2$ ✓SF $\text{Mass/gewig} = 18,2 \times (1,56)^2$ ✓M $= 44,29 \text{ kg}$ ✓A	1SF substitution/vervanging 1M changing the subject of the formula/verander die onderwerp van die formule 1A simplification/ vereenvoudiging NPR (3)	M L2 M
4.3.4	Eat a balanced diet/Eet 'n gebalenseerde dieët OR/OF eat food with lots of fibre/fats/eet kos met baie vessel/ vette OR/OF eat food that will assist her to gain weight/eet kos wat sal help om gewig op te tel✓✓O	2O opinion/ opinie (2)	M L4 E
		[31]	
		TOTAL/TOTAAL:	100