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education

Department:
Education
North West Provincial Government
REPUBLIC OF SOUTH AFRICA

PROVINCIAL ASSESSMENT/ *PROVINSIALE ASSESSERING*

GRADE/*GRAAD 11*

MATHEMATICAL LITERACY P1/ *WISKUNDIGE GELETTERDHEID V1*
NOVEMBER 2024
MARKING GUIDELINES/*NASIENRIGLYNE*

MARKS/*PUNTE*: 100

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

These marking guidelines consist of 11 pages./
Hierdie nasienriglyne bestaan uit 11 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.
- 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 penalise for every extra item presented.
- As a general 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 order to award the verification/conclusion mark the candidate must have scored at least one mark in the calculation preceding the final conclusion.

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 berekeninge wat lei tot die finale gevolgtrekking.

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QUESTION 1/*VRAAG 1* [20 MARKS/*PUNTE*] AO – Full marks			
Q/*V*	**Solution/*Oplossing***	**Explanation/*Verduideliking***	**T/*L***
1.1.1	5 items ✓✓A	2A answer number of items/*antwoord aantal items* (2)	F L1
1.1.2	September month/*maand* ✓✓A **OR/*OF*** 9th month/*9de maand* ✓✓A	2A answer month/*antwoord maand* **OR/*OF*** 2A answer maand/*Antwoord month* (2)	F L1
1.1.3	VAT refers to a consumption tax on goods and services levied at each stage of the supply chain where value is added/*BTW verwys na 'n verbruikersbelasting op goedere en dienste gehef in elke stadium van die in die verskaffing van goedere en dienste* ✓✓A	2A answer/*antwoord* (2)	F L1
1.1.4	VAT/*BTW* = R186,60 × $\frac{15}{115}$ ✓✓MA VAT/*BTW* = R23,33913043 VAT/*BTW* ≈ R23,24 **OR/*OF*** TOTAL = R186,60 ÷ 1,15 ✓MA = R162,2608696 ≈ R162,26 VAT/*BTW* = R186,60 – R162,26 ✓MA VAT/*BTW* = R24,34 **OR/*OF*** TOTAL = R186,60 × $\frac{100}{115}$ ✓MA = R162,2608696 ≈ R162,26 VAT/*BTW* = R186,60 – R162,26 ✓MA VAT/*BTW* = R24,34	2MA multiply with 15 ÷115/ *vermenigvuldig met 15 ÷115* **OR/*OF*** 1MA divide with 1,15/*deel met 1,15* 1MA subtract/*aftrek* **OR/*OF*** 1MA multiply with 100/115 / *vermenigvuldig met 100/115* 1MA subtract/*aftrek* (2)	F L1
1.1.5	Paid with cash/*Met kontant betaal* ✓✓A	2A answer/*antwoord* (2)	F L1
1.1.6	One hundred eighty-six rand and sixty cents/*Eenhonderd ses en tagtig rand en sestig sent* ✓✓A	2A answer in words/*antwoord in woorde* (2)	F L1

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1.2.1	Pie chart/ Sirkelgrafiekof sektorgrafiek ✓✓A	2A answer type of graph/a*ntwoord tipe grafiek* (2)	D L1
1.2.2	Romance = 100 – 28 – 20 – 14 – 12 – 8 ✓MA = 100 – 82 = 18% ✓A	1MA subtract correct values/af*trek van korrekte waardes* 1A answer % romance/a*ntwoord % romanties* (2)	D L1
1.2.3	Most watched = Comedy ✓✓A	2A answer/*antwoord* (2)	D L1
1.2.4	P (true-life story) = 0% **OR** 0,0 **OR** Impossible *W (ware lewensverhaal)* *= 0% **OF** 0,0 **OF** Onmoontlik* ✓✓A	2A answer/*antwoord* (2)	P L1
			[20]

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QUESTION 2/*VRAAG 2* **[31 MARKS/*PUNTE*]**			
Q/*V*	**Solution/*Oplossing***	**Explanation/*Verduideliking***	**T/*L***
2.1.1	Litres petrol per month/*Liter petrol per maand* = R4 500 ÷ R23,25/ℓ ✓MA = 193,5483871 litres ≈ 193,55 litres ✓A	1MA divide with R23,25 per ℓ/*deel met R23,25 per ℓ* 1A answer litre petrol/*Antwoord liter brandstof* (2)	F L1
2.1.2	Total groceries per month/*Totale kruideniersware per month* = R1 150 × 4 weeks ✓MA = R4 600 ✓A	1MA multiply with 4 weeks/*vermenigvuldig met 4 weke* 1A answer total groceries/*antwoord totale kruideniersware* (2)	F L1
2.1.3	Total expenses/*Totale uitgawes* = R8 400 + R8 200 + R2 100 + R4 600 + R4 500 + R2 000 + R4 850 + R1 850 ✓M = R36 500 ✓CA Amount left over to safe/ *Bedrag oor om te spaar* = Income – Expenses = R47 000 – R 36 500 ✓M = R10 500 ✓CA	***CA from QUESTION 2.1.2*** 1M adding all expenses/*optel van alle uitgawes* 1CA answer total expenses/*antwoord totale uitgawes* 1M subtract expenses/*trek uitgawes af* 1CA answer savings/*Antwoord spaargeld* (4)	F L3
2.1.4	% increase $=\frac{2024 - 2023}{2023} \times 100$ $=\frac{R5\,000 - R4\,465}{R4\,465}$ ✓SF × 100 ✓M = 11,98200828667% ≈ 12% ✓RA	1SF correct values in fraction/*korrekte waardes in breuk* 1M multiply with 100/*vermenigvuldig met 100* 1RA answer rounded to whole number/*antwoord afgerond tot heelgetel* (3)	F L2
2.1.5	Other source of income: Earning interest of investment/ Verdien rente met belegging ✓✓O **OR/*OF*** Mr. Smith can word overtime to earn more money/Mnr. Smith kan oortyd werk om eer geld te verdien ✓✓O **OR/*OF*** Mrs. Smith can teach extra classes for extra income/Mev. Smith kan estra klasse aanbied vir ekstra inkomste ✓✓O *Any relevant answer*	2O explanation/*verduideliking* (2)	F L4

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2.2.1	R24 999 in words: Twenty-four thousand, nine hundred and ninety-nine rand/ *Vier-en-twintig duisend, negehonderderd nege-en-negintig rand* ✓✓A	2A correct value in words/*korrekte waarde in woorde* (2)	F L1
2.2.2	Ratio nights at Sudwala to Sabie River 2 : 4 ✓MA 1 : 2 ✓CA	1MA correct ratio order/*korrekte verhouding orde* 1CA simplified ratio/*vereenvoudigde verhouding* (2)	F L2
2.2.3	ONE other expanse/*ander uitgawe*: • Lunch meals that are not included in the package/*Middagetes wat nie ingesluit in die packet nie* ✓✓O • Other forms of travel in the park then road/*Ander vorme van Vervoer as padvervoer* • Other activities/*Ander aktiwiteite* *Name any ONE other expanse/Noem EEN ander uitgawe*	2O ONE other expense/*EEN ander uitgawe* (2)	F L4
2.2.4	Deposits/*Deponeer* = R5 500 × 12 months/*maande* ✓M = R66 000 ✓A Interest earn/*Rente verdien* = R5 500 × 7% = R385 ✓A = R385 × 12 months/*maande* = R4 620 ✓A Total after a year/*Totaal na 'n jaar* = R66 000 + R4 620 = R70 620 ✓CA **OR/*OF*** Interest earn/*Rente verdien* = R5 500 × 7% = R385 ✓A Total per month/*Totaal per maand* = R5 500 + R385 ✓M = R5 885 ✓A Total after a year/*Totaal na 'n jaar* = R5 885 × 12 months/*maande* ✓M = R70 620 ✓CA	1M multiply with 12 months/*vermenigvuldig met 12 maande* 1A answer deposits/a*ntwoord deponeer* 1A answer interest earn per month/*antwoord rente verdien per maand* 1A answer total interest for the year/*antwoord totale rente vir die jaar* 1CA total after a year/*totale na 'n jaar* **OR/*OF*** 1A answer interest earn per month/*antwoord rente verdien per maand* 1M adding deposit plus interest/*bytel van deposito by rente* 1A answer total per month/a*ntwoord totaal per maand* 1M multiply with 12 months/*vermenigvuldig met 12 maande* 1CA total after a year/*totaal na 'n jaar* (5)	F L5

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2.2.5	Investment 6 months/*maande* = R30 000 × $\frac{0,092}{2}$ ✓MA = R1 380 ✓A = R30 000 + R1 380 = R31 380 ✓A Investment 12 months/*maande* = R31 380 × $\frac{0,092}{2}$ = R1 443,48 = R31 380 + R1 443,48 = R32 823,48 ✓A Total of both investments/*Totaal vir beide beleggings* = R70 620 + R32 823,48 = R103 443,48 ✓CA Travel cost for 4 people/*Reiskoste vir 4 mense* = R24 999 × 4 **OR/** R103 443,48 ÷ 4 = R99 996 ***OF*** = R25 860,87 ✓A ∴ Her claim is correct, because the travel cost will be R99 996 and the investments will be R103 443,48, thus they will have enough money for the vacation by R3 447,48./ *Haar bewering is korrek, want die reiskoste beloop R99 996 en die beleggings sal R103 443,48 wees, dus sal hulle genoeg geld het vir die vakansie met R3 447,48.* ✓O	***CA from QUESTION 2.2.4/CA vanaf VRAAG 2.2.4*** 1MA multiply with correct interest rate per half year/*vermenigvuldig met korrekte rentekoers halfjaarliks* 1A answer interest 6 months/a*ntwoord rente 6 maande* 1A answer balance after 6 months/ a*ntwoord saldo na 6 maande* 1A answer balance after 12 months/ a*ntwoord saldo na 12 maande* 1CA answer total of both investments/ a*ntwoord total beleggings* 1A answer cost for 4 people/a*ntwoord koste vir 4 mense* 1O conclusion/*gevolgtrekking* (7)	F L3
			[31]

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QUESTION 3/*VRAAG 3* **[28 MARKS/*PUNTE*]**			
Q/*V*	**Solution/*Oplossing***	**Explanation/*Verduideliking***	**T/*L***
3.1.1	4th fastest/*4de vinnigste* = Henricho Bruintjies ✓✓RT	2RT read from table/*aflees van tabel* (2)	D L1
3.1.2	Arrange/*Rangskik* 1) 14 May 1986 2) 03 April 1992 3) 15 July 1992 4) 16 July 1993 5) 21 September 1993 ✓RT 6) 26 September 1995 ✓A 7) 12 May 1998 8) 27 February 2000 9) 01 February 2001 10) 19 December 2003	1RT correct dates/*korrekte datums* 1A correct descending order/*korrekte dalende orde* (2)	D L2
3.1.3	Modal place of birth/*Modale plek van geboorte* = Pretoria ✓✓A	2A answer modal place of birth/a*ntwoord modale geboorte plek* (2)	D L1
3.1.4	Average (mean) / *Gemiddeld* = Sumtotal ÷ amount of numbers $09{,}919 = \frac{09{,}82+09{,}86+09{,}87+09{,}89+09{,}93+09{,}94+09{,}94+\boldsymbol{A}+09{,}98+10{,}01}{10}$ ✓SF $09{,}919 = \frac{89{,}24+\boldsymbol{A}}{10}$ ✓S $09{,}919 \times 10 = 89{,}24 + \boldsymbol{A}$ $99{,}19 = 89{,}24 + \boldsymbol{A}$ $99{,}19 - 89{,}24 = \boldsymbol{A}$ ✓MA 09,95 seconds = **A** ✓A	1SF substitute formula/*vervang formule* 1S simplification/*vereenvoudiging* 1MA changing the subject of the formula/*verander die onderwerp van die formule* 1A answer A/*Antwoord A* (4)	D L3
3.1.5	Range = biggest – smallest/ *Omvang =grootste – kleinste* ✓MA Range = 10,01 sec – 09,82 sec ✓RT Range = 0,19 seconds ✓CA	1RT correct values/*korrekte waardes* 1MA subtract values/*trek waardes af* 1CA answer range/a*ntwoord omvang* (3)	D L2

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3.2.1	Gauteng medals in total/*medalje in totaal* = 17 + 23 + 29 ✓M = 69 ✓CA	1M adding three values/*tel drie waardes bymeakaar* 1CA answer total medals USA/*Antwoord totale medaljes* (2)	D L1
3.2.2	Difference/*Verskil* NW – Free State = 18 – 9 ✓RT ✓M = 9 ✓CA	1RT correct values/*korrekte waardes* 1M subtract values/*waardes aftrek* 1CA answer difference/a*ntwoord verskil* (3)	D L2
3.2.3	Western Cape % bronze medals/ Wes-Kaap *% brons medaljes* $= \frac{25}{25+18+20}$ ✓MA × 100 ✓M $= \frac{25}{63}$ = 39,68253968% = 39,68% ✓CA	1MA correct fraction values/*korrekte waardes in breuk* 1M multiply with 100/*vermenigvuldig met 100* 1CA answer %/a*ntwoord %* (3)	D L2
3.2.4	P (provinces more than 20 gold)/ *W (provinsies meer as 20 goud)* $= \frac{2}{9}$ ✓A ✓A = 0,222222222 = 0,22 ✓RCA	1A numerator/*noemer* 1A denominator/*teller* 1RCA answer decimal number – rounded to two decimal places/a*ntwoord desimale getal – afgerond tot twee desimale plekke* (3)	P L2
3.2.5	Limpopo total 2024 = 6 + 6 + 4 Limpopo total 2024 = 16 % growth/*% groei* $= \frac{new-old}{old} \times 100 / \frac{nuwe-ou}{ou} \times 100$ $= \frac{16-8}{8}$ ✓MA × 100 ✓M = 100% ✓A ∴ The claim is valid/*Die bewering is geldig* ✓O **OR/*OF*** Total medals 2024 = 6 + 6 + 4 = 16 ✓A 8 × 50% = 4 ✓M 8 + 4 = 12 ✓A 16 is more than 12 (50% growth) ∴ The claim is valid/*Die bewering is geldig* ✓O	1MA correct values/*korrekte waardes* 1M multiply with 100/*vermenigvuldig met 100* 1A answer % increase/a*ntwoord % gestyg* 1O conclusion/*gevolgtrekking* **OR/OF** 1A total medals 2024/*totale medaljes 2024* 1M multiplied with 50%/*vermenigvuldig met 50%* 1A answer added value/*answer vermeerderde waarde* 1O conclusion/*gevolgtrekking* (4)	D L4
			[28]

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QUESTION 4/VRAAG 4 [21 MARKS/PUNTE]			
Q/V	**Solution/*Oplossing***	**Explanation/*Verduideliking***	**T/*L***
4.1.1	Opening balance – 1st day amounts/ *Openingsaldo – 1ste dag bedrae* = R42 952,19 – R2 100 – R8 800 ✓M – R6,00 – R6,00 ✓M = R42 952,19 – R10 912 = R32 040,19 ✓A	1M subtract debit amounts/*aftrek debiet bedrae* 1M subtract transactions costs/*aftrek transaksiekoste* 1A answer balance/*antwoord saldo* (3)	F L2
4.1.2	Transaction cost/*Transaksiekoste* = 1,15% × R1 150 ✓MA = R13,225 ≈ R13,23 ✓A Balance – 2nd day amounts/ *Saldo – 2de dag bedrae* = R32 040,19 – R1 150 – R13,23 ✓M = R32 040,19 – R1 163,23 = R30 876,96 ✓CA **OR/OF** Transaction cost/*Transaksiekoste* = 1,15% × R1 150 ✓MA = R13,225 ≈ R13,23 ✓A Balance – 2nd day amounts/ *Saldo – 2de dag bedrae* = R42 952,12 – R1 150 – R13,23 ✓M = R42 952,12 – R1 163,23 = R41 788,89 ✓CA	***CA from QUESTION 4.1.1/CA vanaf VRAAG 4.1.1*** 1MA multiplying correct values (1,15% and R1 150)/*vermenigvuldig korrekte waardes (1,15% en R1 150)* 1A answer transaction cost/*Antwoord transaksiekoste* 1M subtracting 2nd day amounts/*trek 2de dag bedrae af* 1CA answer balance/*Antwoord saldo* **[Accept: R30 876,97 if rounded only at the end]** **OR/OF** **NOTE: If learners did not CA from QUESTION 4.1.1 and used the opening balance of MNR. SMITH, use this option** 1MA multiplying correct values (1,15% and R1 150)/*vermenigvuldig korrekte waardes (1,15% en R1 150)* 1A answer transaction cost/*Antwoord transaksiekoste* 1M subtracting 2nd day amounts/*trek 2de dag bedrae af* 1CA answer balance/*Antwoord saldo* **[Accept: R41 788,90 if rounded only at the end]** (4)	F L3
4.2.1	P (loan factor more than 19,00)/ *W (leningsfaktor meer as 19,00)* $= \frac{3}{7}$ ✓A ✓A = 42,85714285% ≈ 43% ✓R	1A numerator/*noemer* 1M denominator/*teller* 1R answer % - rounded to whole number/ *antwoord % - afgerond tot heelgetal* (3)	P L2

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4.2.2	Loan amount = selling price – deposit/ *Leningsbedrag = Verkoopprys – deposito* = R198 000 – R29 700 ✓M = R168 300 ✓A	1M subtracting deposit/*trek deposito af* 1A answer loan amount/a*ntwoord leningsbedrag* (2)	F L2
4.2.3	Monthly payment = loan amount ÷ 1 000 × loan factor = R168 300 ÷ 1 000 × 25,60 ✓ = R4 308,48 ✓ Total monthly payment = R4 308,48 + R65,00 admin = R4 373,48 ✓CA	***CA from QUESTION 4.2.2/CA vanaf VRAAG 4.2.2*** 1SF substitute formula/*vervang formule* 1A answer monthly payment/a*ntwoord maandelikse paaiement* 1CA answer total monthly payment/ a*ntwoord totale maandelikse paaiement* (3)	F L3
4.2.4	Total repayment/*Totale terugbetaling* = Deposit + monthly payments = R29 700 + (R4 373,48 × 48 ✓MA) = R29 700 + R209 927,04 ✓M = R239 627,04 ✓CA Interest/*Rente* = total repayment – selling price = R239 627,04 – R198 000 ✓M = R41 627,04 ✓CA ∴ His statement is correct, his interest will be more than R40 000/*Sy stelling is korrek, sy rente sal meer as R40 00 wees* ✓O	***CA from QUESTION 4.2.3/CA vanaf VRAAG 4.2.3*** 1MA multiply months with repayment/ *vermenigvuldig maande met terugbetaling* 1M adding deposit/*bytel van deposito* 1CA answer total repayment/a*ntwoord totale terugbetelaing* 1M subtract selling price/*aftrek verkoopsprys* 1CA answer interest amount/a*ntwoord per maand* 1O conclusion/*gevolgtrekking* (6)	F L4
			[21]
		TOTAL/*TOTAAL*:	**100**

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