LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
EDUCATION

MOPANI WEST DISTRICT

GRADE 12

MATHEMATICAL LITERACY

PRE-JUNE EXAM
MEMO
P1

MARKS: 100

TIME: 2 hours

1.1.1	The amount buyers will pay for the goods HAZEL is selling✓✓O	2E explanation (2)	F L 1
1.1.2	$\frac{R55}{6} = R9.17$ ✓✓A	2A correct answer (2)	F L 1
1.1.3	Dish washer, toilet cleaner, pilchards ✓✓A	2A for toilet cleaner, for dish wash, pilchard R85 (2)	F L 1
1.1.4	=13 ✓✓A	2A correct answer AO (2)	F L 1
1.1.5	Total Cost Price=R85+R85+R85+R90+R55+R9+R70+R 160 +R100+95+R70+90+60 ✓A✓M =R1 073✓CA	1A all correct values 1M adding 1CA answer 2 values left out 1 out of 3 (3)	F L 1

Question 1

QUESTION 2

2.1.1	Fixed costs refer to the costs (R500) that are constant/stays the same despite how many muffins are produced. ✓✓A	2A definition (2)	F L1
2.1.2	Because the electricity cost does not stay the same/ remain constant every month. ✓✓	2O explanation given. (2)	F L1
2.1.3	✓RT Profit per muffin / Wins per muffin = R25 – R15 ✓M Profit per muffin / Wins per muffin = R10✓CA ✓M Profit selling 200 muffins. = (200 × R10) – R500 ✓M Profit selling 200 muffins. = R1 500 Therefore, HAZEL is correct. ✓O OR Income selling 200 muffins.	1RT values 1M subtract. 1CA R10 1M multiply by 200 1M subtract 500. 1O Correct. (6)	F L3

	= R25 × 200 Income selling 200 muffins. = R 5 000 Expenses for 200 muffins = R500 + (R15 × 200) Expenses for 200 muffins = R500 + R3 000 Expenses for 200 muffins = R3 500 Profit = R5 000 – R3 500 Profit = R1 500 Therefore, HAZEL is correct.		

2.2

2.2.1	VAT 15÷115× R1 207,50✓✓MA = R157,50 ✓A OR/OF VAT $= R1\ 207.50 \times \frac{100}{115}$✓MA = R1 050 ✓MA ∴ R1 207,50 – R1 050 = R157,50 ✓A	1A correct percentage 1M multiplying by correct amount 1CA amount of VAT MA dividing correct values 1M subtracting values 1CA amount of VAT AO (3)	F L2
2.2.2	Year 1 R30 000 × 24,5% = R7 350 ✓MA R30 000 + R7 350 = R37 350 ✓CA Year 2 R37 350 × 24,5% = R9 150,75 R37 350 + R9 150,75 = R46 500,75 ✓CA Monthly service fee = R69 × 24 = R1 656 ✓A Total cost of loan = R46 500,75 + R1 656 + R1 207,50 ✓M = R49 364,25 ✓CA Difference = R49 364,25 – R30 000	1MA calculating interest 1CA 2nd year principal 1CA accumulated amount 1A service fee 1M adding all amounts 1CA total cost of loan 1CA difference 1O verification (8)	F L4

	= R19 364,25 ✓CA She is correct ✓O		
2.2.3	Their course (degree/diploma) of interest is not offered in their province (diploma) Freedom from parents To explore other provinces Influence of friends Any other relevant reason ✓✓O	2O reason	F L4

2.3

2.3.1	Gross income is the amount of her salary (income) before deductions are made.	2O correct explanation (2)	F L1 M
2.3.2	Annual taxable income excluding bonus: Pension fund = R27500× $\frac{705}{100}$ =R2062.50✓A Annual taxable income =(R27500 −R2 062.50)✓M =R25 437.50.✓CA =R25 437.50× 12✓MA =R305 250 ✓CA	1M multiplying by 12 1 Pension fund 1A subtraction 1M method 1CA answer/accuracy (5)	F L4
2.3.3	Annual tax: =40 680 +26% (R305 250-226 000)✓SF =R61 285,80✓CA =R61 285− R16425✓MA =R44 860 =R44 860− (347+347+234)✓MA =R43 932 Monthly tax =R43 932÷12✓M =R3 661✓CA	1SF Sustitution 1A correct tax rate 1M subtracting rebate and MTC 1CA medical 1M dividing by 12 1CA answer/accuracy (6)	F L4
2.3.4	Percentage=$\frac{24800-27500}{27500}$ × 100 ✓✓M =−9,8%✓A OR Percentage decrease=(R27500−R24800)÷ *R*24800 × 100 ✓MA ✓M =9,8%✓A	1MA subtracting correct values 1M dividing by R27500 1A answer OR 1SF for substitution 1M dividing by R8 481	F L

		1A answer (3)	

QUESTION 3

3.1

3.1.1	Discrete data is a set of values that can be counted as a whole number.✓A Continuous data is data that you measure as a decimal number.✓A	1 discrete 1 continuous (2)A	D L2
3.1.2	50%✓✓A	2A correct answer	DL1
3.1.3	Range = Maximum value – Minimum value 36= 92 – A ✓MA A= 92-36 =56✓A	1MA subtracting correct values 1A answer (2)	
3.1.4	62✓✓A	2A	
3.1.5	Mean $68=\frac{\Sigma SF}{20}=\frac{64+57+58+62+59+56+61+62+71+62+65+66+64+75+80+B+B+92+85}{20}$ $68=\frac{2B+673}{20}$ ✓MA 2B + 1199 = 1360 2B = 161 ✓MA **B=80.5** **B = 81 ✓CA** **OR/OF** 2B + 1199 = 68× 20 ✓MA 2B + 1199 = 1360 2B = 161✓MA B=80.5 **B = 81✓**	1SF substitution mean correctly 1MA dividing by 9 1MA dividing by 2 1CA simplification OR/OF 1SF substitution mean correctly 1MA multiplying by 9 1MA dividing by 2 1CA simplification (6)	
3.1.6	Median: 56 57 58 59 60 61 62 62 62 64	1M arranging	

	64 65 66 71 75 80 81 81 85 92 ✓M 56; 57; 58; 59; 61; 62; 62; 62; 64; 64; 65; 66; 71; 75; 80; 81; 81; 85; 92 Median = $\frac{64+64}{2}$ ✓M = 64 = 64 ✓CA	data 1M concept of median 1CA answer (3)	
3.1.7	Probability = $\frac{4}{20}$	1RT correct % 1M fractional (2)	P L2 M
3.1.8	56 57 58 59 60 61 62 62 62 64 64 65 66 71 75 80 81 81 85 92 Quartile 1 =$\frac{60+61}{2}$ ✓A =60.5 Quartile 3 = $\frac{75+80}{2}$ = 77.5 ✓A Interquartile range = Q3 – Q1 = 77.5 – 60.5 ✓M = 17 ✓CA	1M arranging values 1A Q1 1A Q3 1M concept of IQR 1CA answer (4)	DG L3

QUESTION 4

4.1

4.1.1	Minimum=12%✓RG Maximum=96%✓RG	1 RG for the minimum 1 RG for the maximum (2)	DH L2
4.1.2	Lower Quartile Mark=28%✓RG Number of learners=120✓A4✓M =34✓CA OR Lower Quartile Mark=28%✓RG Number of learners=28% of 120✓A =25100×120✓M =34✓CA	1RGfor Lower Quartile 1A for 120 1M for dividing by 4 1CA for the answer OR 1RG for Lower Quartile	DH L3

	OR Lower Quartile Mark=28%✓RG Number of learners=0,28×120✓✓M =34✓CA	1A for 25% of 120 1M for method 1CA for the answer OR 1RGfor Lower Quartile 1M for 0,25 1M for multiplying 1CA for the answer (4)	
4.1.3	Lower Quartile=22%✓RG Upper Quartile=58%✓RG IQR=58%−22%✓SF =36%✓CA	1RG for Lower Quartile 1RG for Upper Quartile 1SF substitution 1CA for answer/accuracy (4)	DH L3
4.1.4	2021 Class ✓A Higher maximum mark✓O Higher Lower Quartile✓O Higher Upper Quartile✓O	1A for the class 1O maximum mark 1O for Lower Quartile 1O for Upper Quartile (4)	DH L4

4.2

4.2.1	Immediately get money from customers It easy to collect its income from electricity No bad debts on prepaid electricity It enables its customers to save electricity and the municipality can supply more customers It gets more income on customers that use more electricity✓✓ Accept any other logical explanation.	1O reason 1O reason (2)	F L1 M
4.2.2	Units purchased = $\frac{R68.02}{1.4472}$✓✓ = 47 kWh✓	1MA division with the correct values 1A answer (3)	F L3 M
4.2.3	Municipality's cost = 290 × 1,33✓ = R385,50✓ Customer pays: =50 × 1,4472 = R72,36✓	1A municipality's cost 1MA multiplication and simplification in block 1	F L4 M

	=240 × 1,8606 = R446,544✓ Total price paid = R72,36 + R446,544 = R518,90 % Profit $= \frac{R518.90 - R385.50}{R385.50} \times 100$ = 34,60 %✓ Valid✓	1MA multiplication and simplification in block 2 1SF substitution in formula 1CA answer 1O answer (6)	