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# education

Department:
Education
North West Provincial Government
REPUBLIC OF SOUTH AFRICA

# PROVINCIAL ASSESSMENT

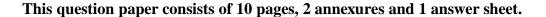
**GRADE 12** 

# **MATHEMATICAL LITERACY P1**

**JUNE 2024** 

**MARKS: 100** 

TIME: 2 hours



#### INSTRUCTIONS AND INFORMATION

- 1. This question paper consists of FOUR questions. Answer ALL the questions.
- 2. Use the ANNEXURES and ANSWER SHEET to answer the following questions.

ANNEXURE A for QUESTION 2.1 ANNEXURE B for QUESTION 2.2 ANSWER SHEET for QUESTION 2.3.2

- 3. Start EACH question on a NEW page.
- 4. Number the answers correctly according to the numbering system used in this question paper.
- 5. You may use an approved calculator (non-programmable and non-graphical), unless stated otherwise.
- 6. Show ALL calculations clearly.
- 7. Round off ALL final answers appropriately according to the given context, unless stated otherwise.
- 8. Indicate units of measurement, where applicable.
- 9. Diagrams are NOT necessarily drawn to scale, unless stated otherwise.
- 10. Write neatly and legibly.



Lebogang compared prices of three different stores during the Black Friday 2023 special.

TABLE 1 below shows the prices at three different stores.

TABLE 1: THE COST OF GROCERY ITEMS AT THREE DIFFERENT STORES.

STORES!					
ITEMS	STORE A	STORE B	STORE C		
1 & Vanilla Custard	5 for R99,00	R20,00	R18,00		
2 ℓ Cooking oil	3 for R200,00	2 for R120,00	R79,00		
500 g Rama	6 for R99,00	2 for R49,00	R15,00		
410 g baked beans	3 for R30,00	5 for R64,00	R10,00		
750 g Cremora	R49,00	2 for R80,00	R35,00		
2 kg Rice	3 for R60,00	3 for R60,00	R20,00		
2 ℓ Oros	R32,00	R36,00	R30,00		
[Adapted from Pinterest 2022]					

[Adapted from Pinterest, 2023]

Use TABLE 1 above to answer the questions that follow.

- 1.1.1 Identify whether the prices given in TABLE 1 are categorical or numerical data. (2)
- 1.1.2 Arrange the prices for store C in ascending order. (2)
- 1.1.3 Name the store with the highest price for  $2 \ell$  Oros. (2)
- 1.1.4 Determine as a unit ratio, in the form 1:..., the  $1 \ell$  vanilla custard price at Store B to the  $1 \ell$  vanilla custard price at store C. (3)
- 1.1.5 Calculate the price of ONE 410 g baked beans at Store B. (2)

[19]

1.2

Mr Moeng contributes a regular monthly amount from his salary towards his pension fund. This amount is deducted from his salary through stop order on the  $15^{\rm th}$  day of each month.

TABLE 2 below shows an extract of the estimated benefit from Government Employees Pension Fund.

# TABLE 2: ESTIMATE OF BENEFITS AS AT 30 AUGUST 2023

Name and surname	Ditiro Moeng
First date of contribution into the fund	15/01/1998
Number of years contributing into the fund	25 years 8 months
Current annual salary	R490 312
Lump sum payable during retirement	R1 186 999
Lump sum payable to beneficiaries	R2 396,76
Resignation benefits	R2 660 582

[Adapted from Government Employee Pension Fund estimated benefit, 2023]

Use TABLE 2 above to answer the questions that follow.

1.2.1 Give the acronym for Government Employees Pension Fund. (2)
1.2.2 Define the term *stop order*. (2)
1.2.3 Write down the resignation benefits amount in words without using numerals. (2)
1.2.4 Round off Mr Moeng's current annual salary to the nearest thousand. (2)



2.1 ANNEXURE A shows an extract from Mr Ditiro's monthly municipal statement including stepped residential water tariffs and fixed rates. Use ANNEXURE A to answer the questions that follow. 2.1.1 Calculate the missing value of A, the previous reading. (3) 2.1.2 Mr Ditiro states that his total water charge (excluding VAT) is R1 434,53 when using the stepped residential water tariffs and fixed rates. Verify, showing ALL calculations, whether his statement is valid. (6)2.2 ANNEXURE B shows Mr Ditiro's home loan statement from ABC Bank. The monthly administration fee remains constant throughout the period of the loan. Use ANNEXURE B to answer the questions that follow. 2.2.1 Write down the date on which the home loan was registered. (2) 2.2.2 The fixed monthly administration fee of R69,00 includes VAT. Calculate VAT amount that is included in the monthly administration fee. (3) 2.2.3 Calculate the administration fee (including VAT) payable for the whole loan period. (3) Calculate the total amount of money that Mr Ditiro will pay back to 2.2.4 the bank. You may use the formula: Total amount = monthly instalment  $\times$  number of months (3) 2.2.5 Mr Ditiro paid more money towards his loan when compared to the agreed monthly instalment. Calculate the extra total payment for the period shown in his home loan statement. (5) Mr Ditiro receives an electronic copy of his statement every month 2.2.6 which is opened only by using his identity number. Give ONE reason for using an identity number to open the home loan statement. (2)

2.3

Aihan wants to start her own business, specialising with one of her favourite Chinese dishes, Chow Mein. Her variable cost to make one plate of Chow Mein is R15,00 and her fixed cost is R750,00. The selling price of one plate is R30,00.

TABLE 3 shows the income and cost from the sale of Chow Mein.

TABLE 3: INCOME AND COST OF SELLING CHOW MEIN PLATES

Number of plates	0	10	30	40	70	90	100
Income (R)	0	300	900	1 200	2 100	2 700	3 000
Cost (R)	750	900	1 200	1350	1 800	2 100	2 250

Use TABLE 3 and the information above to answer the questions that follow.

2.3.1 Determine the number of plates sold if the total cost was R1 950,00.

You may use the formula:

Total Cost = 
$$R750 + 15 p$$
  
where  $p = \text{number of plates}$ . (4)

2.3.2 The income graph has already been drawn on the attached ANSWER SHEET.

Use TABLE 3 and the same grid on the ANSWER SHEET to draw another line graph representing the cost for making different plates of Chow Mein.

(3)

2.3.3 Determine the number of Chow Mein plates at the break-even point.

(2) **[36]** 



3.1 TABLE 4 shows Mathematical Literacy overall performance rates for candidates who wrote the National Senior Certificate Examinations in South Africa for a period of 2016 to 2023.

TABLE 4: OVERALL PERFORMANCE IN MATHEMATICAL LITERACY

	Year	Number	Number	Number	%	Number	%
		Wrote	performed	performed	performed	performed	performed
			below	at 30%	at 30%	at 40%	40% and
l			30%	and above	and above	and above	above
	2016	361 948	104 022	257 926	71,3	167 811	46,4
	2017	313 030	81 800	231 230	73,9	140 991	45,0
	2018	294 204	62 979	213 225	72,5	133 568	45,4
	2019	298 607	57 791	240 816	80,6	В	A
	2020	341 363	83 679	257 684	80,8	197 131	57,7
	2021	441 067	112 685	328 382	74,5	216 692	49,1
	2022	450 005	64 490	385 515	85,7	271 830	60,4
	2023	421 835	74 608	347 227	82,3	239 045	56,7

[Adapted from National diagnostic reports 2022 & 2023]

Use TABLE 4 above to answer the questions that follow.

3.1 Define the term *mode*. (2)

3.2 Calculate the median number of candidates who wrote over the period shown.

(4)

3.3 Calculate the range of percentage performed at 30% and above over the period shown.

(3)

Calculate the percentage decrease for the number of candidates who 3.4 wrote between 2022 and 2023.

(3)

(4)

(3)

You may use the formula:

number wrote in 2023 – number wrote in 2022 % decrease = number wrote in 2022

3.5 Calculate the missing value of A if the mean percentage over the period shown above is 51,9%.

3.6 Comment on the trend of the percentage performed at 40% and above from 2020 to 2023.

3.7 Determine the probability, as a decimal, of randomly selecting the number of candidates who performed below 30% in 2018. (3) [22]

4.1 Siyabonga who is a 65 year old, earn an annual taxable income of R120 278,00 for the 2023/2024 tax year. He is not a member of any medical aid fund.

TABLE 5 below shows the tax table for the year 2023/24 tax year.

TABLE 5: 2023/2024 TAX YEAR (1 March 2023 – 28 February 2024)

1	AXABLE INCOME (R)	RATES OF TAX (R)	
1	1 – 237 100	18% of taxable income	
2	237 101 – 370 500	42 678 + 26% of taxable income above 237 500	
3 370 501 – 512 800 77 362 + 31% of taxable income above 370 500		77 362 + 31% of taxable income above 370 500	
4	512 801 – 673 000	121 475 + 36% of taxable income above 512 800	
5	673 001 – 857 900	179 147 + 39% of taxable income above 673 000	
6	857 901 – 1 817 000	251 258 + 41% of taxable income above 857 900	
7	1 817 001 and above	644 489 + 45% of taxable income above 1 817 000	

TABLE 6 below show the tax rebates for the year 2023/24 tax year.

TABLE 6: TAX REBATES FOR THE YEAR 2023/24 TAX YEAR

THE C. THE REPRIES FOR I				
TAX REBATES				
Primary (Below age 65)	R17 235,00			
Secondary (Age 65 to below 75)	R9 444,00			
Tertiary (Age 75 and over)	R 3 145,00			
[From http://www.sars.gov.za]				

Use TABLE 5 and TABLE 6 above to answer the questions that follow.

4.1.1 Identify which tax bracket Siyabonga falls in, based on his taxable income. (2)

4.1.2 Siyabonga claims that he should NOT be paying any income tax.

Verify, showing ALL calculations, whether his claim is valid. (6)

4.2

Siyabonga's son, Lunga, attended the Expo for Young Scientists in China. He exchanged R2 600,00 for Chinese Yuan.

The exchange rate between South African rands and Chinese Yuan on 12 March 2024 is given in TABLE 7 below.

**TABLE 7: EXCHANGE RATE** 

SOUTH AFRICA RAND (ZAR)	CHINESE YUAN (CN¥)
1	0,39
2,564102564	1
	[From http//www.x-ratess.com]

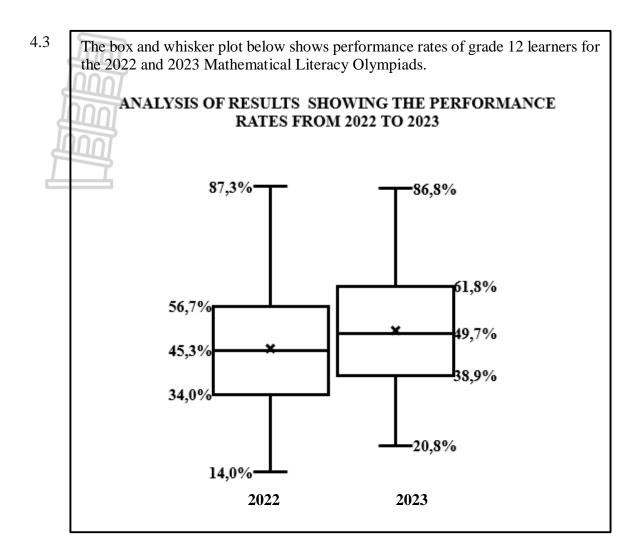
Use TABLE 7 and the information above to answer the questions that follow.

- 4.2.1 Calculate the amount Lunga received in Chinese Yuan (CN¥). (2)
- 4.2.2 Lunga did not spend all his money and decided to invest R550,00 in a fixed deposit account for 2 years at a compound interest rate of 9,5% per annum.

Calculate, without the use of a formula, the value of the fixed deposit at the end of 2 years.

Showing ALL the steps of the calculations. (5)





Use the box and whisker plots above to answer the questions that follow.

4.3.1 Write down the percentage of learners who performed below the 61,8% percentile. (2)
4.3.2 Calculate the interquartile range (IQR) of the performance rate in 2022. (4)
4.3.3 Give ONE reason why the performance rate was higher in 2023. (2) [23]

TOTAL:

100

# ANNEXURE A

# **QUESTION 2.1**

# EXRACT FROM MR DITIRO'S MUNICIPAL STATEMENT

Mr Ditiro	Account No : 0000000957
Alberton	Statement date: 25/10/2023
4.450	

1450

Meter number	Previous reading (kl)	Recent Reading (kl)	Consumption / Water usage (kl)	Reading date
206	A	9 273	24	25/09/2023

STEPPED RESIDENTIAL				
WATER TARIFF				
KILOLITRES TARIFF R/kl				
PER MONTH				
from 0 to 6	R18,12			
More than 6 to 15	R29,86			
More than 15 to 30	R36,58			
More 30 to 45	R45,52			
above 46 or more	R56,12			

FIXED RATES PER MONTH				
TARIFF SUMMARY	TARIFF 2023/24			
Consumption less than or equals to	R0,00			
6 kℓ				
Consumption exceeding 6 kℓ but less	R179,18			
than or equal to 15 kℓ				
Consumption exceeding 15 kℓ but	R727,85			
less than or equal to 30 kl				
Consumption exceeding 30 kℓ	R1 410,40			

[Adapted from www.ekurhulemi.gov.za]



# ANNEXURE B

# **QUESTION 2.2**

# QUARTERLY HOME LOAN STATEMENT FROM ABC BANK.

Mr Ditiro
P.O Box 125
Sandton
Mafikeng
2196
Tel: 0800 555 000

www.abcbank.co.za

Cell: \*\*\* \*\*\* 1294
Bond number: 8230111287
Statement date: 2023/11/30

Total loan amount

Total loan amount			Balance outstanding			
R145 500,00			R81 371,11			
Installment	R1 862,06		Registration date		25/02/2016	
Interest rate	Interest rate 12,40%		Registered		R145 500 ,00	
			amount			
Loan term	240 months					

Date	Transaction	Debit (R)	Credit (R)	Balance (R)
01/09/2023	Balance brought forward			93 653,73
01/09/2023	Interest	1 001,23	0,00	94 654,96
02/09/2023	Insurance	236,15	0,00	94 891,11
15/09/2023	Payment	0,00	2 300,00	92 591,11
30/09/2023	Administration fee	69,00	0,00	92 660,11
	(Including 15% VAT)			
01/10/2023	Interest	954,55	0,00	93 614,66
02/10/2023	Insurance	236,15	0,00	93 850,81
13/10/2023	Payment	0,00	2 300,00	91 550,81
31/10/2023	Administration fee	69,00	0,00	91 619,81
	(Including 15% VAT)		d	
01/11/2023	Interest	908,94	0,00	92 528,75
02/11/2023	Insurance	250,25	0,00	92 779,00
15/11/2023	Payment	0,00	2 300,00	90 479,00

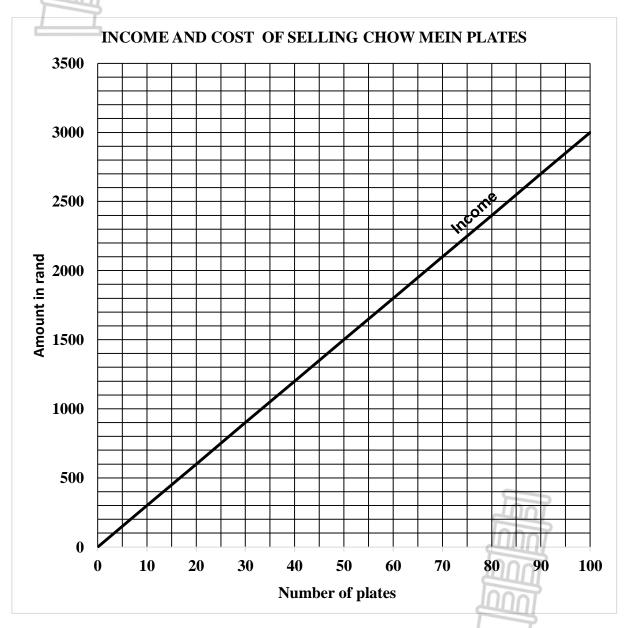
[Adapted from Nedbank home loan statement,2023]

ANSWER SHEET

**QUESTION 2.3.2** 

NAME:

GRADE :\_\_\_\_



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# PROVINCIAL ASSESSMENT

**GRADE 12** 

# MATHEMATICAL LITERACY P1 JUNE 2024 MARKING GUIDELINES

**MARKS: 100** 

Symbol	Explanation
M	Method
MA	Method with accuracy
MCA	Method with consistent accuracy
CA	Consistent accuracy
A	Accuracy
C	Conversion
S	Simplification
RT	Reading from a table/a graph/document/diagram
SF	Correct substitution in a formula
0	Opinion/Explanation/Reasoning
P	Penalty, e.g. for no units, incorrect rounding off, etc.
R	Rounding off
NPR	No penalty for correct rounding
AO	Answer only

These marking guidelines consist of 9 pages.

#### 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.

QUES	QUESTION [19 MARKS] Answer only AO – full marks				
Q	Solution	Explanation	T/L		
1.1.1	Numerical data ✓ ✓ A	2A correct classification	D		
		(2)	L1		
1.1.2	✓RT	1RT all correct values	D		
	R10; R15; R18; R20; R30; R35; R79 ✓ A	1A ascending order	L1		
		(2)			
1.1.3	Store B ✓✓RT	2RT correct store	D		
		(2)	L1		
1.1.4	✓RT	1RT correct values	D		
	20:18 × A	1A values in correct order	L1		
	$= 1:0.9 \checkmark A$	1A simplification			
	D' 410 1 1 11	(3)	Б		
1 1 5	Price per one 410 g baked beans	1MA dividing by 5	F		
1.1.5	$=\frac{R64,00}{5}\checkmark MA$	1 A price per tip/belsed beens	L1		
		1A price per tin/baked beans			
1.0.1	= R12,80 ✓ A	(2)	-		
1.2.1	GEPF✓✓A	2A correct acronym	F		
1.0.0		(2)	L1		
1.2.2	<b>Stop Order:</b> An arrangement between the client and a bank to pay a fixed amount of money from the client	2O explanation	F L1		
	account into another account on a specific date every	<u> </u>	LI		
	month. ✓ ✓ O				
	OR				
	<b>Stop Order:</b> An instruction that an employer or bank				
	to pay/divert monthly or regularly transfer a certain amount to a person or an account. ✓ ✓ O				
	amount to a person of an account.				

_			
1.2.3	OR Stop Order: An instruction that an employee (individual) issue to the employer (bank) to make a series of future dated regular deductions. ✓ ✓ O  OR Stop Order: Future dated regular monthly deductions. ✓ ✓ O  R2 660 582	(2) 2A correct wording	F
	Two million six hundred and sixty thousand five hundred and eight two rand. ✓✓A	(2)	L1
1.2.4	Current annual salary R490 312 ✓ RT = R490 000 ✓ R	1RT correct value 1R rounding (2)	F L1
OHE	STION 2 136 MADKSI	[19]	
2.1.1	The value of A		F
2.1.1	rne value of A  ✓RT		L1
	$= 9273 - 24 \text{ kl } \checkmark \text{M}$ $= 9 249 \text{ k} l \checkmark$	1RT identifying values 1M subtracting 1A answer (3)	
2.1.2	Total water charge $\checkmark$ MA $\checkmark$ RT $\checkmark$ M $B = (6 \times R18,12) + (9 \times R29,86) + (9 \times R36,58)$ $= R108,72 + R268,74 + R329,22$ $= R706, 68 \checkmark A$	1MA identifying 6, 9, 9 1RT identifying R18,12; R29,86; R36,58 1M multiplying 1A simplification	F L4
	Adding fixed cost to water charge = R706, 68 + R727,85 ✓ RT = R1 434,53  The statement is <b>VALID</b> ✓ O	1RT fixed cost 1O opinion	
2.2.1	25/02/2016 ✓ ✓ A	2A correct date (6)	F
2.2.2	Amount without VAT = $\frac{R69}{1,15}$ $\checkmark$ MA = $R60,00$	1MA dividing by 1,15	L1 F L2
	$\therefore VAT \text{ amount} = R69,00 - R60,00 \checkmark M$ $= R 9,00 \checkmark A$	1M subtracting 1A VAT amount	
	•	•	•

	OR	OR	
	Amount without VAT = $R69 \times \frac{100\%}{1150}$ $\checkmark$ MA	1MA multiplied by $\frac{100\%}{1173}$	
	115%	115%	
	= R60,00		
	NAT	13.6	
	$\therefore VAT \text{ amount} = R69,00 - R60,00 \checkmark M$ $= R9,00 \checkmark A$	1M subtracting 1A VAT amount	
	- K 9,00 × A	1A VAI allioulit	
	OR	OR	
	✓MA		
	VAT amount = R69,00 × $\frac{15\%}{115\%}$ $\checkmark$ M	1MA multiplying by 15%	
	$\sqrt{\text{A1 amount}} = \text{Roy}, 00 \times \frac{115\%}{115\%}  \checkmark \text{M}$	1M dividing by 115%	
	= R9,00 <b>√</b> A	1 4 37 4 75	
		1A VAT amount (3)	
222	Total and and of a locinization for	(3)	Г
2.2.3	Total amount of administration fee  ✓RT		F L1
	$= R69.00 \times 240 \checkmark MA$	1RT 240 months	LI
	= R16 560,00 ✓ A	1MA multiplying	
		1A answer	
		(3)	
2.2.4	Total amount	<b>CA from 2.2.3</b>	F
	✓RT		L2
	$= R1.862,06 \times 240 \checkmark SF$	1RT monthly instalment	
	= R446 894,40 ✓A	1SF correct substitution 1A answer	
		(3)	
2.2.5		CA from 2.2.4	F
	Extra amount paid		L3
	✓RT	1RT R2 300,00	
	$= R2\ 300,00 - R1\ 862,06 \checkmark MA$	1MA subtracting	
	= R437,94 ✓ CA	104 : 1:5 (	
	Extra amount paid for 3 months	1CA simplification	
	= R437,94 × 3 months ✓ MCA = R1 313,82 ✓ CA	1MCA multiplying by 3 1CA answer	
	OR	1C/1 dilowel	
	Amount paid for 3 months	HILLI I	
	_	OR	
	✓RT	1RT R2 300,00	
	$= R2\ 300\ .00 \times 3 \checkmark MA$	1MA multiplying by 3	
	= R6 900,00 ✓ CA	1CA simplification	
	Amount to be paid for 3 months $= R1 862,06 \times 3$	1CA simplification	
	$= R1.802,00 \times 5$ = R5.586,18 $\checkmark$ CA	TCA simplification	
	Extra amount paid = R6 900,00 – R5 586,18	1CA answer	
	= 1 313,82 ✓ CA	1011011011011	
		(5)	

226	To appropriate an explored desires 4/0	20 ******	Г
2.2.6	To prevent money laundering ✓ ✓ O  OR	2O reason	F L4
	To prevent fraud ✓ ✓ O		L
	OR		
	To view privately / Confidential ✓ ✓ O		
		(2)	
2.3.1	Total cost = $R750 + 15p$ , where $p = number of plates$		F
	✓SF	107	L2
	R1 950 = R750 + 15p $R1 950 - R 750 = 15p \checkmark MA$	1SF correct substitution	
	R1 $930 - R / 30 = 13p \checkmark WA$ R1 $200 = 15p \checkmark S$	1MA subtracting R750 1S simplification	
	$p = 80 \checkmark CA$	1CA answer	
		(4)	
2.3.2	INCOME AND COST OF SELLING CHO	OW MEIN PLATES	F
		WEINTEATES	L2
	3500		1.2
	2000		
	3000		
	2500		
		Income Cost	
	2000		
	1500 Est 2000 Est 200		
	1500		
	§ 1300		
	1000		
	500		
	0 10 20 30 40 50 60	70 80 90 100	
	Number of plates of Ch	ow Mein	
	1A Start point (0, 750) ✓		
	1A End point (100, R2 250)✓	TUUUT	
	1A correct straight line ✓	Innai	
		(3)	
2.3.3	50 1 ( (DT		F
	50 plates ✓✓RT	2RT number of plates	L2
	OR	OR	
	$30p = R750 + 15p \checkmark MA$	1MA breakeven concept	
	R750 = 15p	1A answer	
	$p = 50 \checkmark A$		
		(2)	
		[36]	

QUE	STION 3 [ 22 MARKS]		
3.1	The value that appear the most in a data set. ✓ ✓ O	2O explanation (2)	D L1
3.2	Arranging 294 204; 298 607; 313 030; 341 363; 361 948;	1A arranging values	D L2
	$421 835;$ $441 067; 450 005 \checkmark A$ $\checkmark RT$ $Median = \frac{341363 + 361948}{2} \checkmark MA$	1RT two middle values 1MA concept of median	
	$= \frac{2}{2}$ $= 351 655,5 \checkmark CA$	1CA simplification (4)	
3.3	Range = Maximum value – Minimum value  ✓RT = 85,7% – 71,3% ✓MA = 14,4% ✓A	1RT correct values 1MA concept of range 1A simplification (3)	D L2
3.4	Percentage decrease $ \sqrt{RT} = \frac{421835 - 450005}{450005} \times 100\% $	1RT correct values 1A correct denominator	D L2
	= − 6,3 % ✓ A	1A simplification NPR	
	OR ✓RT	OR	
	$= \frac{421\ 835}{450\ 005} \times 100\% \checkmark MA$ $= 93,7400695548\%$ $= 93.7400695548\%$	1RT correct values 1MA calculating %	
	= 93,7400695548% − 100% = − 6,3% ✓ A	1A simplification NPR (3)	
3.5	Value A $\checkmark$ MA $51,9 = \frac{46,4+45,0+45,4+A+57,7+49,1+60,4+56,7}{8}$	1MA concept of mean	D L3
	$51.9 = \frac{\cancel{MA}}{8}$	1MA adding values	
	$A = 51,9 \times 8 - 360,7 \checkmark M$ $A = 415,2 - 360,7$ $A = 54,5\% \checkmark CA$	1M changing the subject of the formula 1CA simplification (4)	

		T	1 _
3.6	√0	10 decrease 2020 to 2021	D
	The performance decreased from 2020 to 2021,		L4
	<b>V</b> O	10 increase in 2022	
	increased in 2022 and decreased again in 2023 ✓ O.	1O decrease in 2023	
		(3)	
3.7	Probability		P
			L3
	✓A		
	62 979	1A numerator	
	$=\frac{1}{294204}$ $\checkmark$ A	1A denominator	
	25 1 20 1		
	= 0,2 <b>√</b> CA	1CA simplification	
		NPR	
		(3)	
		[22]	



QUES	QUESTION 4 [23 MARKS]		
Q	Solution	Explanation	T/L
4.1.1	Tax bracket 1✓✓RT	2RT tax bracket	F
	nni	(2)	L1
Tr		CA from Q 4.1.1	
4.1.2	Income tax		F
	120 278 × 18 × MCA	1MCA calculating 18%	L4
	$= 120\ 278 \times \frac{18}{100} \checkmark MCA$		
	= R 21 650,04 ✓ CA	1CA simplification	
	✓MA		
	$= R21 650,04 - (R9 444 + R17 235) \checkmark MA$	1MA subtracting R9 444	
	= R21 650,04 – R26 679	1MA subtracting R17 235	
	$= -R5\ 028,96 \checkmark CA$	1CA simplification	
	His statement is <b>VALID</b> ✓O	10 conclusion	
	OR	OR	
	Annual Taxable Income		
	= R120 278		
	Rebates		
	= R9 444 + R17 235 ✓ MA	1MA adding rebates	
	= R26 679✓ CA	1CA simplification	
	Tax Threshold		
	= R26 679 ÷18% ✓ MCA	1MCA dividing by 18%	
	= R148 216,67 ✓ CA	1CA simplification	
	R148 216,67 is greater than R120 278 ✓O	1O reason	
	His statement is <b>VALID</b> ✓O	10 conclusion	
		(6)	
4.2.1	Amount in Chinese Yuan	Jului	F
		1MA multiplying by 0,39	L2
	$= \frac{\text{R2 }600}{\text{R1}} \times 0.39 \text{ CN} \text{YMA}$	CN¥	
		1A simplification	
	= 1 014 CN¥ ✓A		
		OR	
	OR	1MA dividir -	
	$= \frac{R2600}{R2,564102564} \times 1 \text{ CN} \text{ VMA}$	1MA dividing	
	R2,564102564	1A simplification	
	= 1 014 CN¥ ✓ A	(2)	

422	D550 00 0 50/ /MA	13/1414:1: 1 0.50/	Т
4.2.2	Interest after 1 year = $R550,00 \times 9,5\% \checkmark MA$ = $R52,25 \checkmark A$	1MA multiplying by 9,5% 1A interest 1 <sup>st</sup> year	F L3
	- K32,23 V A	1A interest 1 year	L3
To	Amount after 1 year = $R550,00 + R52,25$		
#	= R602,25 \( \)CA	1CA 1 <sup>st</sup> year amount	
I)	nni		
7	Interest after 2 years = $R602,25 \times 9,5\%$		
	= R57, 21 ✓ CA	1CA interest 2 <sup>nd</sup> year	
	Amount after 2 years = $R602,25 + R57,21$		
	= R659,46 <b>√</b> CA	1CA answer	
	OR	OR	
	100% + 9,5% = 109,5% ✓A	1A 109,5%	
	100/0 1 2,3/0 = 102,3/0 11	111 100,570	
	Amount after 1 year = $R 550,00 \times 109,5\%$ ✓ MA	1MA multiplying 109,5%	
	= R602, 25 ✓ A	1A 1 <sup>st</sup> year amount	
	Amount after 2 years = $R602,25 \times 109,5\%$ $\checkmark$ M	1M multiplying by 109,5%	
	= R659,46 <b>✓</b> CA	1CA answer	
4.3.1	75% ✓✓ A	(5)	D
4.5.1	13% <b>V V</b>   A	2A correct percentage	D
4.0.0	10D 02 01 (M)	(2)	L2
4.3.2	$IQR = Q3 - Q1 \checkmark MA$ $\checkmark RT \checkmark RT$	1MA concept of IQR	D
	= 56,7 – 34	100	L3
	= 22,7 <b>√</b> CA	1RT correct value (Q3)	
	- 22,1 · CA	1RT correct value (Q1)	
		1CA simplification	
		(4)	
4.3.3	The median of the data is the highest in 2023. ✓ ✓ O	2O explanation	D
	OR		L4
	Q3 is higher in 2023 than in 2022. ✓ ✓ O		
	OR		
	Extra classes. ✓ ✓ O	and a second	
	Improved learner and teacher attendance. ✓ ✓ O	Innn	
	Self-disciplined learners. ✓ ✓ O		
	Parental involvement. ✓ ✓ O	###	
	Curriculum coverage. ✓ ✓ O		
	Effective school management . ✓ ✓ O		
		(2)	
		[23]	
		TOTAL: 100	
		T .	1