Province of the
EASTERN CAPE
EDUCATION

NATIONAL SENIOR CERTIFICATE

GRADE 12

JUNE 2024

MATHEMATICAL LITERACY P1

MARKS: **100**

TIME: **2 hours**

This question paper consists of 9 pages, including an answer sheet.

INSTRUCTIONS AND INFORMATION

1. The question paper consists of FOUR QUESTIONS. Answer ALL the questions.
2. Start EACH question on a new page.
3. Number the answers correctly according to the numbering system used in this question paper.
4. Leave ONE line between two sub-questions, for example between QUESTION 2.1 and QUESTION 2.2.
5. Use the ANSWER SHEET attached to answer QUESTION 3.6.
6. You may use an approved calculator (non-programmable and non-graphical), unless stated otherwise.
7. You may use appropriate mathematical instruments.
8. Show ALL formulae and substitutions in ALL calculations.
9. Round off your final numerical answers to a minimum of TWO decimal places.
10. Write neatly and legibly.

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QUESTION 1

1.1 The parking tariffs at BT Ngebs Mall in Mthatha are given below. The rate is charged per hour or part thereof. Study the table below and answer the questions that follow.

TABLE 1: PARKING TARIFF AT BT NGEBS

PARKING TARIFFS	
HOURS	**RATE**
0–1 hour	R5,00
1–3 hours	R10,00
3–4 hours	R15,00
4–5 hours	R20,00
5–6 hours	R25,00
6 + hours	R45,00
Lost Ticket	R70,00
Overnight	R100,00

DISCLAIMER OF LIABILITY

Saipark, BT Ngebs Mall and/or their employees, agent, or sub-contractors shall not be liable for any loss or damage of whatever nature caused, which is suffered by the customer in respect of any vehicle or any goods left or deposited with Saipark, BT Ngebs Mall/or their employees, agent, or sub-contractors, while such vehicle or goods are on the premises of BT Ngebs Mall, even where the loss is caused by the negligence or gross negligence of Saipark, BT Ngebs Mall and/or their employees or sub-contractors.

1.1.1 Write down the amount that a customer who spends 2,5 hours at the mall will pay. (2)

1.1.2 Define the term "*part thereof*" in the given context. (2)

1.1.3 On a Black Friday special, customers only have to pay 75% of the usual tariff. Calculate the amount paid by a customer who spends 4,25 hours in the mall. (2)

1.2 The total number of qualified teachers in South Africa in 2022 was 490 993. 68% of the teachers are female.

1.2.1 Is the data discrete or continuous? (2)

1.2.2 Write the number of qualified teachers in words. (2)

1.2.3 Determine how many teachers are males. (3)

1.2.4 Express as a ratio the number of female teachers to the total number of qualified teachers. Write your ratio in the form 1 : … (3)

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1.3 Choose the appropriate option for the following given statements. Write the question number and the letter only, for example, 1.3.3 E.

A – Certain	**B – Impossible**	**C – Even chance**	**D – Less likely**

1.3.1 The probability of selecting a learner doing Mathematical Literacy and Mathematics. (2)

1.3.2 The probability of selecting a taxpayer receiving all the three rebates at a local school. (2)

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QUESTION 2

Daniel is a 53-year-old man earning a monthly gross salary of R32 500. He contributes 7,5% of his salary towards pension each month. He contributes towards medical aid for himself, his wife and three children. Use the tax table below to answer the questions that follow.

TABLE 2: 2023 TAX YEAR (1 MARCH 2022 – 28 FEBRUARY 2023)

TAXABLE INCOME (R)	RATES OF TAX
1 – 226 000	18% of taxable income
226 001 – 353 100	40 680 + 26% of taxable income above 226 000
353 101 – 488 700	73 726 + 31% of taxable income above 353 100
488 701 – 641 400	115 762 + 36% of taxable income above 488 700
641 401 – 817 600	170 734 + 39% of taxable income above 641 400
817 601 – 1 731 600	239 452 + 41% of taxable income above 817 600
1 731 601 and above	614 192 + 45% of taxable income above 1 731 600

REBATES

Primary rebate	R16 425
Secondary rebate – 65 years and older	R9 000
Tertiary rebate – 75 years and older	R2 997

MEDICAL TAX CREDIT RATES

Taxpayer	R347 per month
Taxpayer + first dependent	R694 per month
Each additional dependent	R234 per month

[Adapted from www.sars.gov.za. Accessed 10 January 2024]

2.1 Determine the annual contribution towards pension. (3)

2.2 Daniel claims that his tax is more than 15% of his monthly gross salary. Show with calculations that his statement is VALID or not. (9)

2.3 Show how R239 452 in tax bracket 6 is calculated. (3)

2.4 Daniel received a lumpsum for having spent 20 years working for the same company. The company rule is to award employees with 80% of their monthly gross salary. Daniel invested the amount he received into an account offering 11,5% p.a., compounded annually. Calculate how much will he receive after three years. (6)

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QUESTION 3

The provincial number of voters that was recorded after the first registration in November 2023 are shown in the table below. Use the table to answer the questions that follow.

TABLE 3: PROVINCIAL NUMBER OF REGISTERED VOTERS

PROVINCE	NUMBER OF REGISTERED VOTERS	PERCENTAGE
Eastern Cape	3 348 392	12,47
Free State	1 422 384	5,3
Gauteng	6 274 046	23,37
KwaZulu-Natal	**A**	20,76
Mpumalanga	1 965 259	7,32
Northern Cape	634 792	2,3
Limpopo	2 714 474	10,11
North West	1 718 340	6,4
Western Cape	3 198 146	**B**
Total	26 850 972	100

[Adapted from www.elections.org.za. Accessed on 7 January 2024]

3.1 Determine which province recorded the least number of voters. (2)

3.2 There are two ways to calculate the value of **A**. Use both methods to calculate the number of voters registered in KwaZulu-Natal and explain why the answers are different. (6)

3.3 Show that the percentage of voters in the Western Cape is 11,91%. (3)

3.4 Calculate the mean number of voters in South Africa per province. (4)

3.5 Determine the interquartile range for the number of registered voters. (6)

3.6 Use the provided ANSWER SHEET to draw the line graph for the percentage of voters per province. (4)

3.7 Give a possible reason why the number of registered voters is important to political parties. (2)

3.8 Determine the probability, as a decimal, rounded off to 3 decimal places of selecting a registered voter residing in the Cape province(s). (3)

[30]

QUESTION 4

In the Africa Cup of Nations, the winning soccer team was promised $7 million. The team, including the technical staff, has a total number of 30 members. They are going to share the $7 million equally.

4.1 4.1.1 Write the winning money in digits. (2)

4.1.2 Determine how much each member will receive if they win the tournament. Round off the answer to the nearest 1 000. (3)

4.2 The South African cricket team participated up to the semi-final in the 2023 Cricket World Cup. There were two main sponsors from different countries. They used their own currency to pay players for different awards such as the most sixes scored, player of the match and player of the tournament.

Use the exchange rates given below to answer the questions that follow.

TABLE 4: EXCHANGE RATES OF BUYING AND SELLING FOREIGN CURRENCY

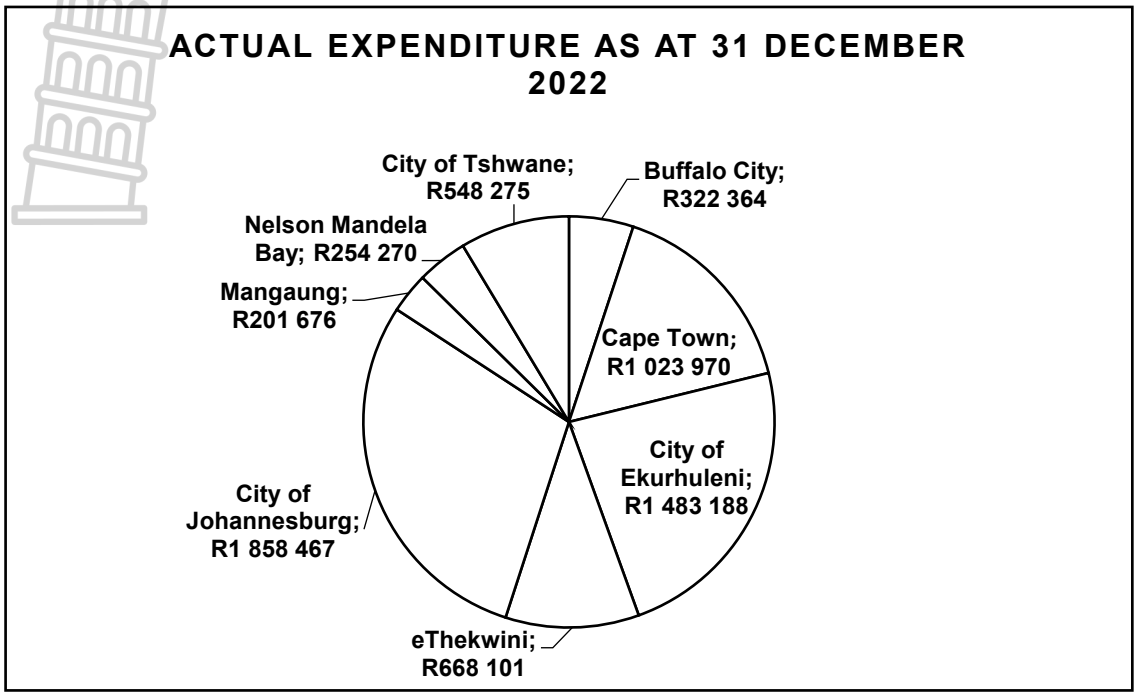
CURRENCY	BUYING	SELLING
US Dollar $	R19,1305	R18,9739
British Pound £	R24,3861	R23,9202

4.2.1 There is 2,5% commission charged when converting into local currency. Calculate how much will be deposited into the player's account, in Rands, if he was given $5 000 and £2 000 from the two main sponsors. (6)

4.2.2 Give a possible reason why there is a difference between buying and selling foreign currency. (2)

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4.3 The diagram below shows the expenditure of the metropolitan municipalities of South Africa in the year ending 2022.



[Adapted from www.gov.local-government.gov.za. Accessed on 6 January 2024]

4.3.1 How many provinces have metropolitan municipalities in the country? (2)

4.3.2 Name the type of graph that was used to represent the actual expenditure in the metropolitan municipalities of South Africa. (2)

4.3.3 Show that the probability of choosing a municipality that has an expenditure of at most R0,7 million is 62,5%. (4)

4.4 Thandi buys and sell stationery packs at schools in her community. The table below shows the cost and income per stationery pack.

TABLE 5: COST AND INCOME PER PACK

Number of packs	0	10	20	30	40	50	60
Cost of packs	R6 000	R9 500	R13 000	R16 500	R20 000	R23 500	R27 000
Income of packs	0	R7 500	R15 000	R22 500	R30 000	R37 500	R45 000

4.4.1 Define the term *break-even* in the given context. (2)

4.4.2 Name the type of cost that R6 000 represents. (2)

4.4.3 Determine how many packs Thandi must sell to break-even. (4)

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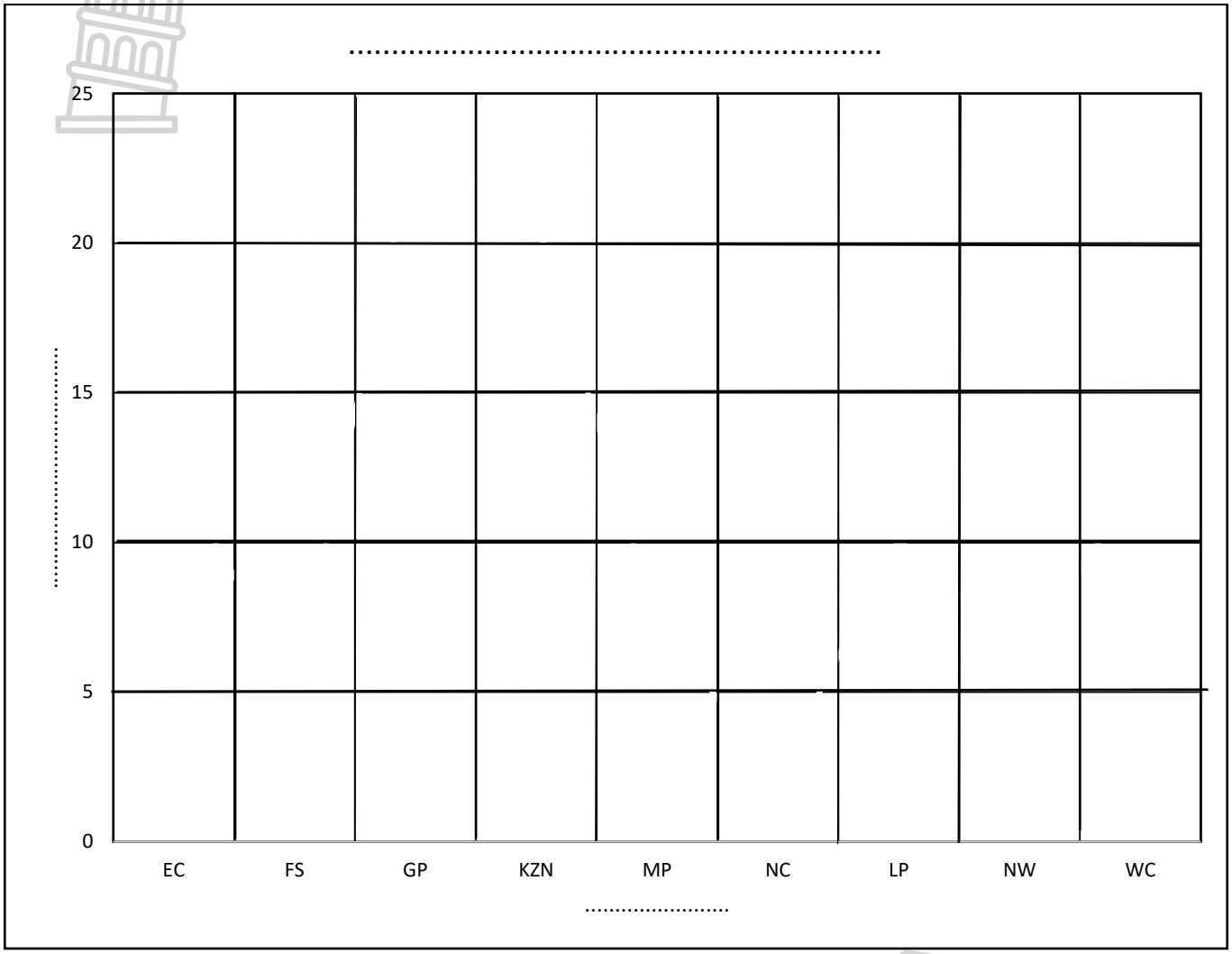
TOTAL: 100

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ANSWER SHEET

NAME OF LEARNER: _____ **GRADE 12:** _____

QUESTION 3.6



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ERRATUM

TO: **CHIEF EDUCATION SPECIALISTS**
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PRINCIPALS OF SCHOOLS IN THE FET BAND

SUBJECT: **ERRATUM – MATHEMATICAL LITERACY P1 GRADE 12 JUNE COMMON 2024**

DATE: **31 MAY 2024**

The Mathematical Literacy P1 Grade 12 June Common Examination was written on Friday, 24 May 2024. We were made aware of certain amendments and omissions that were discovered during the marking process and memorandum discussion on the provided marking guideline.

In order to address this and to ensure that learners are not disadvantaged, the following standardised approach to marking must be adopted across the province. The following guidelines regarding marking was prepared in conjunction with the examiner and moderator.

Issues have been raised regarding the questions as per the table hereunder, regarding fairness in terms of assessment and in conjunction with the examiners and moderator, the following recommendations have been decided upon.

Question	Notes
1.2.2	If learners wrote "Four hundred and ninety thousand, nine hundred and ninety-three **comma sixty – eight percent**" give 1 mark
1.2.3	490 333 on second option should 490 993
1.2.4	If learners used percentage: Allocate 2 marks for the ratio and one mark for simplification
1.3	Accept words as well (Impossible and Less likely)

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1.3.2	Accept **B** as well
2.2	After calculating monthly tax other learners will calculate % $\frac{3676,71}{33\,300} \times 100 = 11,01\%$ ✓
2.4	Ag the compound interest calculation
3.2	Allocate 3 marks on method 1 and then 1 mark on the reason
3.3	B = 12,47 + 5,3 + 23,57 + 20,76 + 7,32 + 2,3 + 10,11 + 6,4 = 100 B = 100 – 88,23 B = 11,77
3.5	CA from 3.2 IQR – CA if lower quartile is less than upper quartile
3.6	If learners plot a bar graph instead of a line graph, allocate 3 marks
3.8	If learners wrote $\frac{3}{9} = 0,333$, allocate 1 mark for rounding to 3 decimal places only
4.2.1	CA if learners used "buying rate" instead of "selling rate". Maximum marks will be 5
4.3.1	The question is integrated from Maps and Plans, Learners are expected to know about metropolitan municipalities. So it is only 5 provinces that have Metropolitan Municipalities (EC – 2, GP – 3, FS – 1, KZN – 1 and WC – 1)

We sincerely apologise for any inconvenience we might have caused.

Yours in education.

MRS P.E. JAPHTA
(A) CES: AIDIBM SUBDIRECTORATE

31 May 2024
DATE

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