



education

Department:
Education
North West Provincial Government
REPUBLIC OF SOUTH AFRICA

PROVINCIAL ASSESSMENT

GRADE 12

MATHEMATICAL LITERACY P1

JUNE 2025

MARKS: 100

TIME: 2 hour

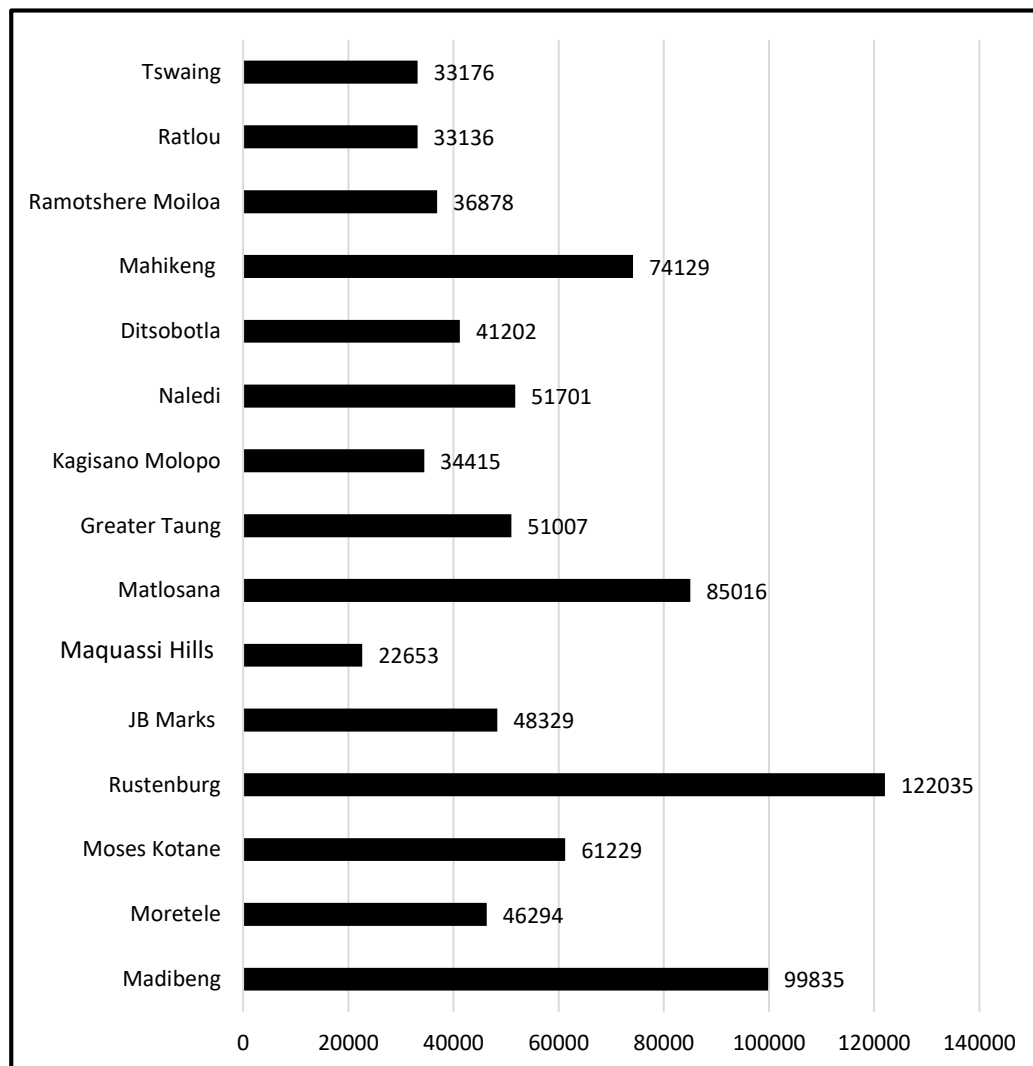
This question paper consists of 11 pages and an annexure.

INSTRUCTIONS AND INFORMATION

1. This question paper consists of FOUR questions. Answer ALL the questions.
2. Use the ANNEXURE to answer QUESTION 2.3.
3. Number the answers correctly according to the numbering system used in this question paper..
4. Start EACH question on a NEW page.
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.

QUESTION 1

- 1.1 The graph below shows the learner enrolment in the Local Education Offices of North West Province during the 2022 academic year. The 2022 total number of enrolled learners in the North West Province was 841 035.

LEARNER ENROLMENT IN LOCAL EDUCATION OFFICES

[Adapted from NW Dept of Education, Annual Performance plan, March 2024]

Use the information above to answer the questions that follow.

- 1.1.1 Identify the type of the graph shown above. (2)
- 1.1.2 Write down the Local Education Office with the SECOND LOWEST number of enrolled learners. (2)

- 1.1.3 Dr Kenneth Kaunda is one of the districts in the North West Province. It consists of JB Marks, Matlosana and Maquassi Hills Local Education Offices.

Calculate the total number of learners enrolled in Dr Kenneth Kaunda district. (3)

- 1.1.4 Calculate, as a unit ratio, in the form 1 : ..., the number of learners enrolled in Naledi to the number of learners enrolled in Rustenburg. (3)

- 1.2 Tumelo owns two vehicles and he compared their services.

TABLE 1 below shows the service of TWO different vehicles.

**TABLE 1: SERVICE FOR DIFFERENT VEHICLES
(PRICES INCLUDE VAT)**

DESCRIPTION	VW CITI GOLF	TOYOTA YARIS
Air filter	R96,17	R250,44
Oil filter	R51,92	R99,00
Fuel filter	R158,65	R89,00
Right hand wiper blade	R32,93	R135,25
Front brake pads	R328,57	R686,64
Rear brake pads	R619,38	R237,78
TOTAL	R1 287,62	A

[Adapted from <http://businesstech.co.za>]

Use TABLE 1 above to answer the questions that follow.

- 1.2.1 Determine the missing value, **A**. (2)

- 1.2.2 Express the price of the oil filter for the VW Citi Golf as a percentage of the total amount of the service. (3)

- 1.2.3 Calculate the total amount paid for the brake pads of the VW Citi Golf. (3)

- 1.2.4 Identify the car which is more cost effective when it is serviced. (2)
[20]

QUESTION 2

- 2.1 Lebogang lives in Tshwane and has a prepaid electricity meter in her home. Tshwane municipality uses sliding scale tariffs for prepaid electricity.

TABLE 2 below shows the standard sliding scale tariffs per month for prepaid electricity.

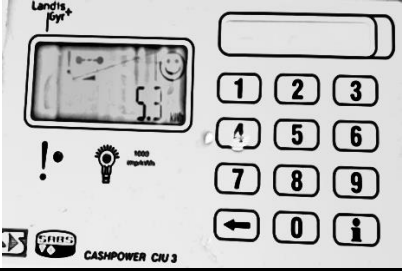
TABLE 2: 01 JULY 2023 to 30 JUNE 2024 STANDARD SLIDING SCALE TARIFFS PER MONTH FOR PREPAID ELECTRICITY

UNITS (kWh)	TARIFF PER UNIT (R) VAT INCLUSIVE
0–100 kWh	2,775755
101–400 kWh	3,248405
401–650 kWh	3,539125
> 650 kWh	3,81524

[Adapted from [https:// www.martinique.co.za](https://www.martinique.co.za)]

TABLE 3 below show the readings on Lebogang's electricity meter before and after she purchased electricity on 1 June 2024.

TABLE 3: READINGS ON THE ELECTRICITY METER BEFORE AND AFTER THE PURCHASE OF ELECTRICITY ON 1 JUNE 2024.

BEFORE PURCHASE	AFTER PUCHACE
	
READINGS	
5,3 kWh	142,4 kWh

Use TABLE 2 and TABLE 3 to answer the questions that follow.

- 2.1.1 Explain the meaning of the term *tariff* in this context. (2)
- 2.1.2 Lebogang purchased R398,00 worth of prepaid electricity (including VAT) on the 1 June 2024.
- (a) Show that the meter reading after purchase is CORRECT, rounded to the nearest whole number. (7)
- (b) Calculate the VAT amount on her electricity purchase. (3)

- (c) On the 15 June 2024 the meter reading was 82 kWh. Lebogang claimed that the units of electricity that were used from the day of purchase up to this date was more than 66 kWh.

Verify, showing ALL calculations, whether her statement is VALID. (3)

- 2.2 Lesedi is 55 years old and earns a monthly taxable income of R36 780,00 in the 2024/2025 tax year. She does not belong to a medical aid.

TABLE 4 below shows the tax table for the 2024/2025 tax year.

TABLE 4: 2024/2025 TAX YEAR (1 March 2024 to 28 February 2025)

Tax Bracket	Taxable income (R)	Tax rates (R)
1	0 – 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
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 5 below show the tax rebates for the 2024/2025 tax year.

TABLE 5: TAX REBATES FOR THE 2024/2025 TAX YEAR

TAX REBATES	
Primary (under age 65)	R17 235,00
Secondary (age 65 and older)	R9 444,00
Tertiary (age 75 and older)	R 3 145,00

[Adapted from www.sars.gov.za]

Use TABLE 4 and TABLE 5 above to answer the questions that follow.

- 2.2.1 Identify the tax bracket that Lesedi will use to calculate her income tax payable. (3)
- 2.2.2 Show how the amount of R121 475 in tax bracket 4 was calculated. (5)

- 2.2.3 Lesedi took early retirement at the age of 56 after 29 years of pensionable service. Her normal retirement age is 60. Her final salary was R42 270. She retired four years early and her gratuity was reduced by 16%.

NB: Gratuity is once-off lump sum.

Calculate her reduction amount on her gratuity.

You may use the following formula:

$$\text{Gratuity} = \text{Final salary} \times \left(\frac{15}{26}\right) \times \text{Number of years of service} \quad (4)$$

- 2.2.4 After early retirement, Lesedi decided to invest R25 600 in a fixed deposit account for $1\frac{1}{2}$ years at a compound interest of 8,60% per annum.

Calculate, without the use of the formula, the value of the investment at the end of the period.

Show ALL the steps of the calculations. (6)

- 2.3 The ANNEXURE shows the North West Department of Education's Expenditure during 2021/2022 and 2022/2023.

Use the ANNEXURE to answer the questions that follow

- 2.3.1 Identify the item that was over spent by less than R20 million in 2021/2022. (2)

- 2.3.2 Calculate the percentage change of the allocated amount for sports and culture between 2022/2023 and 2021/2022.

You may use the following formula:

$$\text{Percentage change} = \frac{\text{new price} - \text{old price}}{\text{old price}} \times 100\% \quad (3)$$

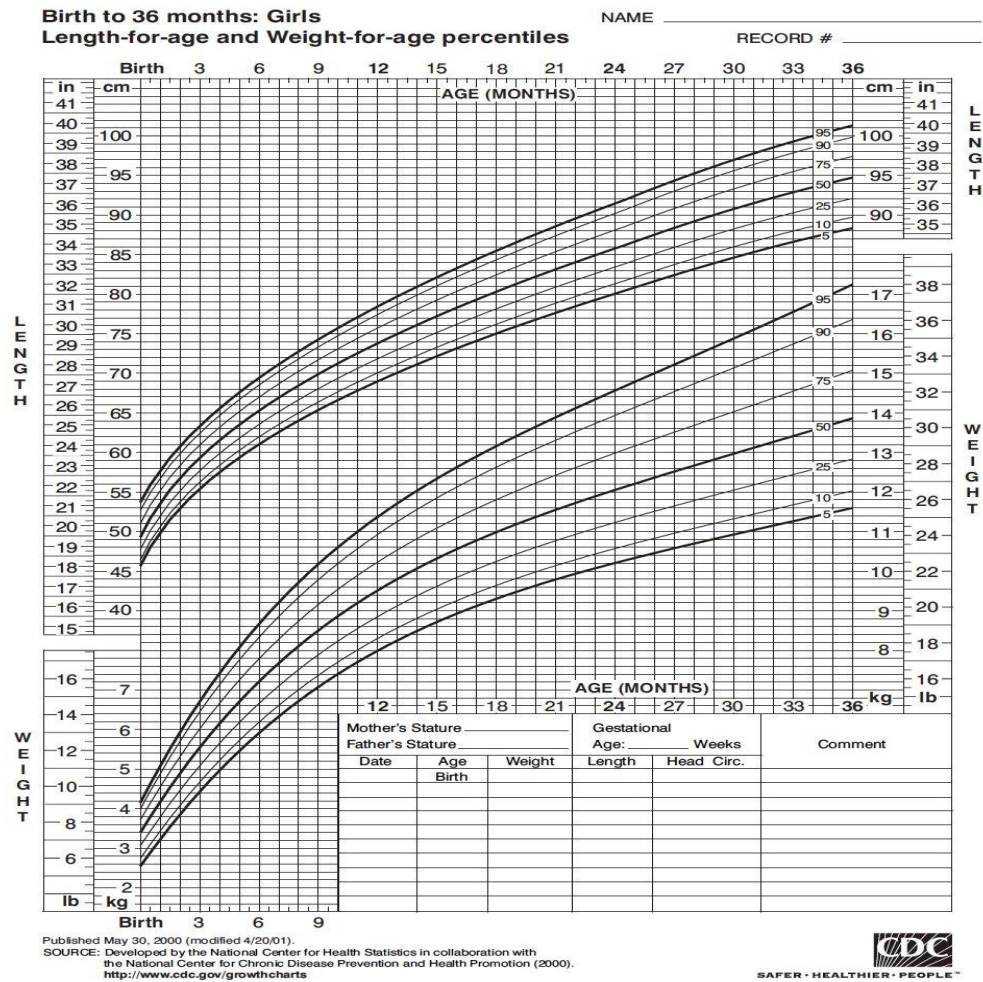
- 2.3.3 The School Nutritional Programme under spent by 0,512% of the allocated amount during 2022/2023.

The teacher stated that the value of **B**, the actual expenditure of the School Nutritional programme, will be less than R595 005 000.

Verify, showing ALL calculations, whether the claim is VALID. (6)
[44]

QUESTION 3

- 3.1 The growth chart below shows the length and weight -for-percentiles of girls from birth to 36 months.



[Adapted from [http:// www.who.int](http://www.who.int)]

Use the growth chart above to answer the questions that follow.

- 3.1.1 Write down, in centimetre (cm), the length of a girl that is 6 months old and positioned on the 50th percentile. (2)
- 3.1.2 A 18 month old girl weighs 22 lb. Identify the TWO percentiles between which the weight of the girl will be positioned. (2)

- 3.2 TABLE 6 below shows the number of learners in Further Education and Training (FET) in South Africa during 2022.

TABLE 6: NUMBER OF LEARNERS IN FET IN SOUTH AFRICA

PROVINCE	GRADE 10	GRADE 11	GRADE 12	TOTAL
Eastern Cape	150 384	120 993	100 224	371 601
Free State	65 970	45 156	44 478	155 909
Gauteng	217 926	166 069	142 380	526 375
KwaZulu Natal	265 344	240 164	179 968	685 476
Limpopo	159 557	125 375	112 773	397 705
Mpumalanga	100 529	84 902	72 226	257 657
Northern Cape	24 477	16 189	14 152	54 818
North West	72 180	53 708	45 220	171 108
Western Cape	92 070	75 494	63 904	231 468

[Adapted from www.education.gov.za EMIS]

Use TABLE 6 above to answer the questions that follow.

- 3.2.1 Choose the correct option (**A, B, C, D or E**) that represents the stage in the data handling process where the above data will be recognised as numerical data.
- A Collecting data
B Summarising data
C Analysing data
D Classifying and organising data
E Representing data (2)
- 3.2.2 Calculate the range of the number of grade 12 learners. (3)
- 3.2.3 Give a reason why the number of grade 10 learners in the Northern Cape is considered to be an outlier in the data set for grade 10 learners. (2)
- 3.2.4 The mean number for grade 12 learners is 81 122,78. A Principal claimed that the difference in the mean mark for both grade 11 and 12 is less than 21 600.
- Verify, showing ALL calculations, whether the Principal's claim is VALID. (5)
- 3.2.5 Determine the probability, as a percentage, of randomly selecting a grade 11 learner from Limpopo Province of all the grade 11 learners. (3)
- 3.2.6 Comment on the trend of the number of learners from grade 10 to 12. Give ONE reason for this trend. (4)
- [23]**

QUESTION 4

- 4.1 Terry wants to visit his brother who is staying in Canada. Before he leaves, he wants to exchange R1 670,00 for Canadian dollar.

TABLE 7 below shows the currency conversion factors for Countries as at 23 February 2025.

TABLE 7: CURRENCY CONVERSION FACTOR FOR FIVE COUNTRIES AS AT 23 FEBRUARY 2025

CURRENCY	UNIT PER ZAR	ZAR PER UNIT
Canadian Dollar (CAD)	0,077572	12,891276
Swiss Franc (CHF)	0,048928	20,438165
Indian Rupee (INR)	4,720072	0,211861
Botswana Pula (BWP)	0,750625	1,332224
Libyan Dinah (LYD)	0,266678	3,749838

[Adapted from www.x-rates.com]

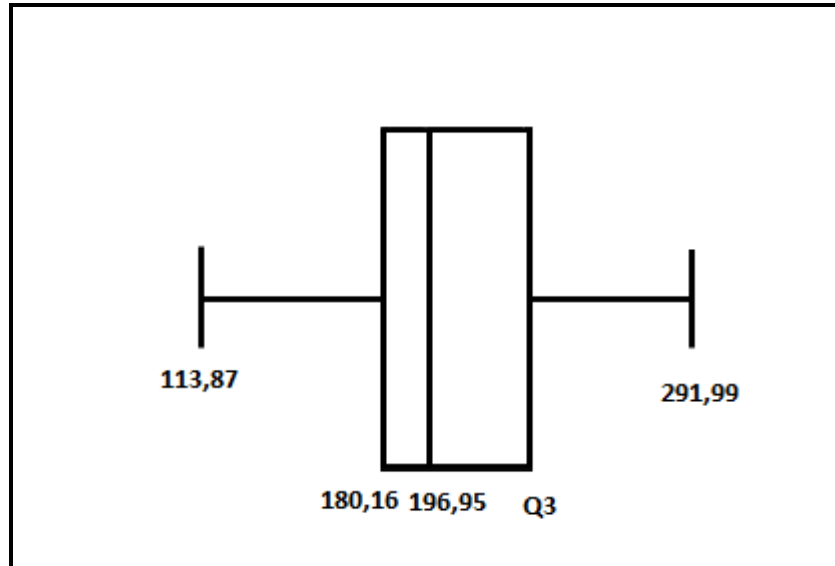
Use TABLE 7 to answer the questions that follow.

- 4.1.1 Define the term *Exchange rates*. (2)
- 4.1.2 Identify the currency that is weaker than the South African rand. (2)
- 4.1.3 Calculate the amount Terry will receive in Canadian Dollar (CAD). (3)

4.2

The box and whisker plot below shows the number of people (in million) who downloaded the TikTok app worldwide from 2018 to 2024.

NUMBER OF PEOPLE WHO DOWNLOADED TIKTOK APP FROM 2018 TO 2024.



[Adapted from www.businessof apps.com]

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

4.2.1 Write down the 50th percentile of the number of people who downloaded TikTok app. (2)

4.2.2 The interquartile range for the number of people that downloaded TikTok is 52,58 million.

Calculate the value of the upper Quartile (Q3). (4)
[13]

TOTAL: 100

ANNEXURE**QUESTION 2.3****TABLE 6: EXPENDITURE IN THE DEPARTMENT OF EDUCATION**

	2022/2023		2021/2022	
DETAILS	ALLOCATED BUDGET (R 000)	ACTUAL EXPENDITURE (R 000)	ALLOCATED BUDGET (R 000)	ACTUAL EXPENDITURE (R 000)
Public Primary	8 941 949	8 960 389	8 694 899	8 689 697
Public Secondary	5 658 844	5 322 967	5 127 040	5 112 921
Human Resource Development	49 520	46 311	32 449	30 079
Sports and Culture	37 840	28 760	39 236	15 551
School Nutritional programme	597 063	B	547 682	506 709
Maths, Science and Technology grant	44 520	37 623	41 592	2 845

[Adapted from Department of Education Annual report 2022/2023 Financial year]