



LIMPOPO

PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
EDUCATION

MOPANI WEST DISTRICT

MATHEMATICAL LITERACY

GRADE 12

TERM 1 COMMON TEST

11 MARCH 2024

stanmorephysics.com

MARKS : 100

TIME : 2 HRS

This question paper consists of 11 pages and an addendum with 4 annexures

INSTRUCTIONS AND INFORMATION

1. This question paper consists of FIVE questions. Answer ALL the questions.
2. Use the ANNEXURES in the ADDENDUM to answer the following questions:
 - ANNEXURE A for QUESTION 2.1
 - ANNEXURE B for QUESTION 2.2
 - ANNEXURE C for QUESTION 3.2
 - ANNEXURE D for QUESTION 4.2
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. Maps and diagrams are NOT necessarily drawn to scale, unless stated otherwise.
10. Write neatly and legibly.




QUESTION 1

1.1

A generator is a useful device that can be used to provide an alternate source of electricity during a power outage.

Shown below is a picture of a generator with different payment options

PAYMENT OPTIONS OF A GENERATOR		
<p>Cash price</p> <p>R10 999 (including 15% VAT)</p> 	<p>Hire-purchase</p> <p>Deposit: 10%</p> <p>Instalment: R534,14 pm × 24 months</p> <p>Interest rate: 14,75%</p>	<p>Online credit (via Mobicred)</p> <p>Instalment: R1 006 pm × 12 months</p> <p>Interest rate: 9,76%</p>

[Adapted from www.muncha.com]

Use the information above to answer the questions that follow.

1.1.1 Give TWO payment options for this generator. (2)

1.1.2 Define hire-purchase within the given context. (2)

1.1.3 Write down the interest rate if the generator was bought on hire-purchase. (2)

1.1.4 Calculate the total cost of the generator using Mobicred. (2)

1.1.5 A 13,8% discount is given on the cash price.

Calculate the amount of discount given if the generator is purchased for cash. (2)

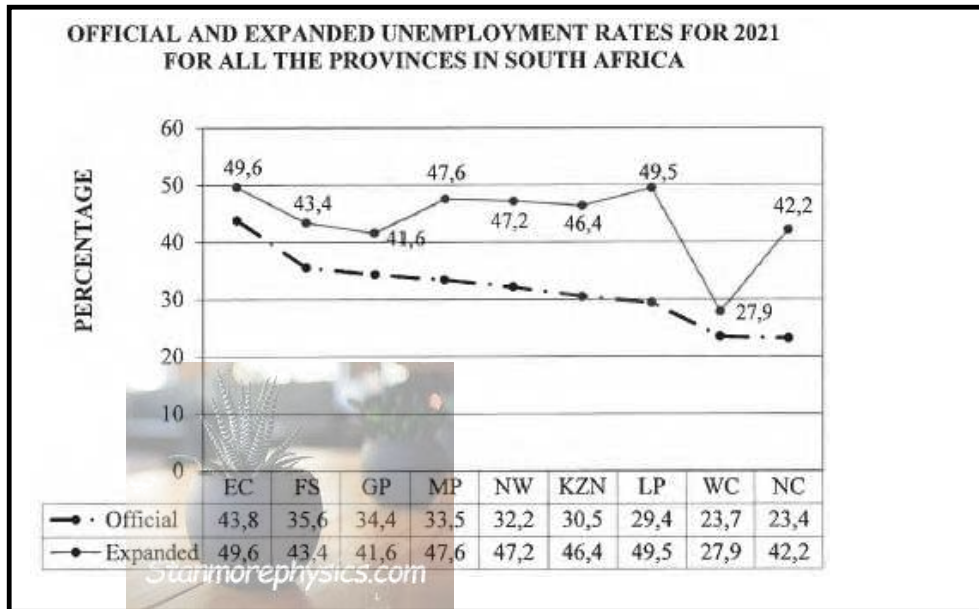
1.1.6 Name the type of interest charged if the generator is bought on hire-purchase. (2)

1.2 The line graph below shows the official and expanded unemployment rates for 2021 for all the provinces in South Africa.

NOTE:

The **expanded unemployment** rate includes the statistics of unemployed persons not looking for employment or trying to become self-employed.

The **total labour force** includes all those who are employable, including the unemployed.



Use the graph above to answer the questions that follow.

1.2.1 Write down the province with the:

(a) Highest expanded unemployment rate (2)

(b) Smallest difference between the official unemployment rate and the expanded unemployment rate. (2)

1.2.2 Determine which province represents the modal official unemployment rate. (2)

1.2.3 The total labour force for the Free State (FS) was 918 000 in 2021.
Calculate the number of officially unemployed people in the Free State. (3)

[21]

QUESTION 2

2.1

Bongiwe received her levy statement of account from Rango Property Specialist for her rented unit.

ANNEXURE A shows her adapted statement of account.

Use ANNEXURE A to answer the questions that follow.

- 2.1.1 Write down the reference number that Bongiwe must use when she pays her account. (2)
- 2.1.2 Give ONE reason why reference numbers are used when making payments. (2)
- 2.1.3 Calculate the missing value A, which has been omitted from the statement. (2)
- 2.1.4 The total amount due for this invoice is R2 340,73, including 15% VAT.
Calculate the total amount due, excluding VAT. (2)
- 2.1.5 Calculate (rounded to TWO decimal places) the standard levy for June 2021 as a percentage of the amount due on the statement. (4)
- 2.1.6 Write down a possible payment option Rango Property Specialist will accept. (2)
- 2.1.7 Blueberry Gardens have 49 units in total.
Calculate the total amount collected by the body corporate if all 49 units paid their levy CSOS on 1 July 2021. (3)
- 2.1.8 The Blueberry Gardens body corporate increased the standard levy by 8,55% from 1 August 2021.
Calculate the new standard levy after the increase. (4)

2.2

Bongiwe 's son, Mahlatse who stays at Toronto in Canada considers moving to either Cape Town or Ekurhuleni in South Africa.

ANNEXURE B shows the comparison of water tariffs in some of the metropolitan areas in South Africa.

Mahlatse estimates that he will use an average of 55 kℓ of water per month.

Use ANNEXURE B to answer the question that follows.

Mahlatse states that if he chooses to live in Ekurhuleni, he will be paying R4 200 more per year compared to a person living in Cape Town who also uses an average of 55 kℓ of water per month.

Show, by means of calculations, whether Mahlatse's statement is CORRECT. (8)

[29]



QUESTION 3

3.1

TABLE 2 below shows the estimated provincial half-yearly livestock numbers (in thousands) for the nine provinces in South Africa for August 2023 and February 2024.

TABLE 2: ESTIMATED PROVINCIAL LIVESTOCK NUMBERS (IN THOUSANDS) IN SOUTH AFRICA (AUG.2023 AND FEB.2024)

PROVINCE	ESTIMATED LIVESTOCK NUMBERS (IN THOUSANDS)					
	Cattle		Sheep		Goats	
	Aog.'23	Feb.'24	Aog.'23	Feb.'24	Aog.'23	Feb.'24
Western Cape	466	466	2 545	2 497	202	199
Northern Cape	419	418	5 182	5 079	448	446
Free State	2 054	2 023	4 330	4 362	215	211
Eastern Cape	3 050	3 059	6 513	6 364	1 991	1 968
KwaZulu-Natal	2 380	2 320	628	610	662	651
Mpumalanga	1 248	1 243	1 527	1 508	78	76
Limpopo	860	850	A	192	902	909
Gauteng	246	246	84	83	21	20
North West	1 576	1 545	596	585	651	641
Total	12 299	12 170	...	21 310	5 170	5 121

[Adapted from www.dalrrd.gov.za]

Use TABLE 2 above to answer the questions that follow.

- 3.1.1 Write down the province with the third highest number of sheep for February 2024. (2)
- 3.1.2 Calculate Free State's estimated total number of livestock for August 2023. (3)

3.2

South Africa's agricultural sector sales in 2019 amounted to R317,6 billion.

ANNEXURE C shows the distribution of these sales, as well as a further distribution of livestock sales into animals and produce.

Use ANNEXURE C and the information above to answer the questions that follow

- 3.2.1 State whether the data displayed on ANNEXURE C is categorical or numerical data. (2)
- 3.2.2 Determine missing value A. (2)
- 3.2.3 Calculate, in millions, the actual rand value of horticulture sales. (3)

[12]

QUESTION 4

- 4.1 Mr Jack, aged 58, earned an annual taxable income of R545 340 for the year ending 29 February 2024. He does not contribute to any medical aid.

Use the above information to answer the questions that follow.

- 4.1.1 The following formula can be used to calculate annual tax payable before the rebate:

$$\text{Annual Tax Payable before the rebate} \\ = 121\,475 + [36\% \times (\text{annual taxable income} - 512\,800)]$$

Use this formula to calculate Mr Jack's annual tax payable before the rebate. (3)

- 4.1.2 Mr Jack feels that the monthly tax table is an easier option for him to calculate his monthly tax payable.

TABLE 3 below shows the monthly deductions for three income categories for the year ending 29 February 2024.

TABLE 3: MONTHLY DEDUCTION TAX TABLE FOR THREE INCOME CATEGORIES FOR THE YEAR ENDING 29 FEBRUARY 2024

Monthly Income	Tax payable per age group		
	Under 65	65 – 74	Over 75
45 351 – 45 401	9646	8896	8718
45 402 – 45 452	9664	8914	8700
45 453 – 45 502	9685	8932	8682

The monthly rebate for a person younger than 65 years old is R1 436,25.

Verify, showing ALL calculations, whether his monthly tax will be correct according to the monthly deduction table. (6)

- 4.1.3 Write down the probability of selecting a monthly tax amount of R9 646 for a person over 75 years from this monthly tax table. (2)

4.2

The pie charts on ANNEXURE D compare the five best-selling vehicles in South Africa, America and Canada for 2021.

Use ANNEXURE D to answer the questions that follow.

4.2.1 Write down, in words, the total number of vehicles sold in America. (2)

4.2.2 Write down the median number of the best-selling vehicles in South Africa. (2)

4.2.3 Determine the number of Ford F-series vehicles sold in Canada. (2)

4.2.4 The interquartile range for the top 10 vehicles sold in South Africa is 7 669 and the value of Quartile 1 is 11 408.

Calculate the value of Quartile 3. (3)

4.2.5 The inflation rate in America for 2021 was 7% and in 2020 it was 1,4%. The price of a Ford F-series vehicle in 2022 is \$32 332.

It is stated that the price of the Ford F-series vehicle in 2020 was more than \$29 800.

Verify, showing ALL calculations, whether this statement is valid. (5)

4.2.6 Determine, as a percentage, the probability of purchasing a Ram Pickup in America. (3)

[28]



QUESTION 5

5. Mary has established that the cost of relocating a family of four to New Zealand is approximately R280 000. Her husband is an entrepreneur and wants to start his own business in New Zealand. Mary, who is a teacher, would need a skilled migrant resident visa, while her husband will need an entrepreneurs visa.

A skilled migrant resident visa costs €2 093 and a visa for entrepreneurs costs NZ\$4 745.

TABLE 4 shows the exchange rate for selected countries on 3 September 2021.

TABLE 4: EXCHANGE RATE ON 3 SEPTEMBER 2021

US dollar	\$1	14,455516 ZAR
Euro	€0,0581765	1 ZAR
British pound	£1	20,01924 ZAR
Japanese yen	¥1	0,13156142 ZAR
New Zealand dollar	NZ\$0,0969907	1 ZAR

[Adapted from www.new-zealand-immigration and www.bussinesstech.co.za]

Use the information above to answer the questions that follow.

- 5.1 Determine the exchange rate of the New Zealand dollar (NZ\$) in terms of the euro (€) on 3 September 2021 in the form 1 NZD: ... (4)
- 5.2 Calculate (rounded to the nearest R100) the total cost of the two visas that they will require on 3 September 2021. (6)

[10]

TOTAL: 100

