KWAZULU-NATAL PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 12



MATHEMATICAL LITERACY

COMMON TEST

MARCH 2024

MARKS: 100

TIME: 2 hours

This question paper consists of 9 pages, and an Addendum with 2 Annexures.

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INSTRUCTIONS AND INFORMATION

1. This question paper consists of FOUR questions. Answer ALL the questions.

2. Use ANNEXURES in the ADDENDUM to answer the following questions:

   - ANNEXURE A for QUESTION 1.1
   - ANNEXURE B for QUESTION 1.2

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. Write neatly and legibly.

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QUESTION 1

1.1 In January 2024 South African employees earn a monthly minimum net wage of R4 353, as compared to R3 979 in January 2023. A basket of basic food products cost R1 503 in January 2024 (6,07% more than 2023). ANNEXURE A in the ADDENDUM shows the cost of the basket of basic food products for January 2024.

Use the information above and ANNEXURE A to answer the questions that follow.

1.1.1 Calculate the cost of one loaf of bread in January 2024. (2)

1.1.2 Show how the percentage 34,5% was determined. (2)

1.1.3 Determine the cost of $\frac{1}{2}$ kilogram of fruit in January 2024. (2)

1.1.4 Write down the cost of meat (6 kg) as a percentage of the shopping basket value in January 2024. (2)

1.1.5 Express, in its simplest form, the ratio of the cost of 10 loaves of bread to the cost of rice (1,5 kg). (2)

1.2 The MEC for Finance in KwaZulu Natal Provincial Government presented her budget speech in March 2023 for the period 2023/2024. ANNEXURE B shows the expenditure summary by Vote (Sector or Department).

Use ANNEXURE B to answer the questions that follow.

1.2.1 Explain the term *deficit*. (2)

1.2.2 Write down the main appropriation amount for Education in words. (2)

1.2.3 Show how the adjusted appropriation amount for the Office of the Premier was calculated. (2)

1.2.4 The 2023/2024 estimated medium term revenue for KZN provincial government is R146 152 803 000. Write this amount in millions. (2)

1.2.5 Use the revenue in 1.2.4 above and the total main appropriation (R146 040 964 000) to determine the provincial government's surplus or deficit. (2)

[20]

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QUESTION 2

2.1

Mr. Ngema is a farmer and would like to buy a Toyota Land Cruiser. He does not have enough money to purchase the vehicle. He used the online Vehicle Finance calculator and got the following two payment options for the Toyota Land Cruiser



TABLE 2: PAYMENT OPTIONS FROM WESBANK AND ABSA BANK

TOYOTA LAND CRUISER	WESBANK	ABSA BANK
Cash Price (VAT Inclusive)	**R1 250 000,00**	**R1 250 000,00**
Deposit	**R 125 000,00**	**R 125 000,00**
Monthly Instalment	**R 24 608,32**	**R 21 338,64**
Balloon Payment	**R 62 500,00**	**5%**
Monthly Admin Fee	**R 69,00**	**R 69,00**
Once-off Initiation Fee	**R 1 207,50**	**R 1 207,50**
Term Agreement	**72 months**	**72 months**

[**Adapted from www.absa.co.za**]

*Balloon payment is a lumpsum payment to be paid to the bank at the end of loan period.

N.B: Monthly instalment includes monthly admin fee and once-off initiation fee.

Use the information above to answer the questions that follow.

2.1.1 Calculate the difference in monthly instalment between the two banks. (2)

2.1.2 The once-off initiation fee is financed as part of the loan amount, calculate the loan amount from Wesbank. (3)

2.1.3 Calculate the real cost of the loan if Mr. Ngema buys the car through Absa bank. (3)

You may use the formula:
Real Cost of Loan = Term Agreement × Instalment + Balloon Payment

2.1.4 Mr Ngema claims that the total interest charged by Wesbank is **R708 091,54**. Use calculations and the loan amount in 2.1.3 to verify his claim. (5)

You may use the formula:
Total Interest = Real Cost of Loan − Loan Amount

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2.2 Mr Ngema wants to invest R35 000 for 6 years at 8,9% p.a interest compounded half yearly to raise the balloon payment of R62 500 for his Toyota Land Cruiser.

Use the information above to answer the questions that follow.

2.2.1 Determine, to four decimal places, the interest rate for 6 months. (2)

2.2.2 The amount in Mr Ngema's investment account at the end of 5 years will be R96 597,18. Calculate the total investment at the end of the 6th year. (5)

2.3 Nkosi household in eThekwini Municipality is classified as indigent (economically disadvantaged). The municipality uses the following tariff rates to charge indigent households for water consumption.

TABLE 3: ETHEKWINI MUNICIPALITY WATER TARIFFS 2023/2024

CONSUMPTION IN kℓ	RATE IN RAND/kℓ VAT EXCLUSIVE
0 kℓ - 6 kℓ	R0,00
+6 kℓ - 25 kℓ	R24,88
+25 kℓ - 30 kℓ	R34,07
+35 kℓ - 45 kℓ	R75,13
+45 kℓ	R82,63

[**Adapted from www.dag.durban.gov.za**]

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Use the information above to answer the questions that follow.

2.3.1 In January 2024, Nkosi household paid R409,17 including 15% VAT. Calculate the amount excluding VAT. (2)

2.3.2 The household used 18 kℓ of water in January 2024, calculate the amount paid to the Municipality excluding 15% VAT. (3)

2.3.3 In December 2023 the Nkosi household paid R492,52 including 15% VAT. Calculate the kilolitres of water used by the household. (5)

[30]

QUESTION 3

3.1

According to SARS, the Monthly Tax Deduction table shows that a person aged 65 to 74 years earning a monthly taxable salary of R45 279 will pay R8 834 in tax per month for 2023/24. This person does not belong to a medical aid scheme. TABLE 4 and TABLE 5 show the Income tax rate and Tax Rebate table for the year 2023/2024.

TABLE 4: INCOME TAX RATE FOR 2024 TAX YEAR (1 MAR 2023 – 29 FEB 2024)

Taxable income (R)	Rates of tax (R)
1 – 237 100	18% of taxable income
237 101 – 370 500	42 678 + 26% of taxable income above 237 100
370 501 – 512 800	77 362 + 31% of taxable income above 370 500
512 801 – 673 000	121 475 + 36% of taxable income above 512 800
673 001 – 857 900	179 147 + 39% of taxable income above 673 000
857 901 – 1 817 000	251 258 + 41% of taxable income above 857 900
1 817 001 and above	644 489 + 45% of taxable income above 1 817 000

TABLE 5: TAX REBATES

Tax Rebate			Tax Year
	2024	**2023**	**2022**
Primary	R17 235	R16 425	R15 714
Secondary (65 and older)	R9 444	R9 000	R8 613
Tertiary (75 and older)	R3 145	R2 997	R2 871

[Adapted from:www.sars.gov.za]

Use the information above to answer the questions that follow.

3.1.1 Determine the annual taxable income this person pays per year. (2)

3.1.2 Identify which income tax bracket will be used to calculate their annual tax. (2)

3.1.3 Verify, showing all calculations, if the Monthly Tax Deduction table amount of R8 834 is correct. (6)

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3.2

The South African Treasury released the projected revenue and expenditure estimates for the national budget. TABLE 6 shows the Tax revenue received in 2023/2024 and TABLE 7 shows the estimated budgets from 2022 to 2026.

TABLE 6: TAX REVENUE RECEIVED FOR 2023/2024



TABLE 7: GOVERNMENT BUDGET FROM 2022 TO 2026

R billion/percentage of GDP	2022/23	2023/24	2024/25	2025/26
	Revised estimate	Medium-term estimates		
Revenue	1892.7	1958.9	A	2225.3
	28.5%	*28.0%*	*27.9%*	*28.0%*
Expenditure	2168.8	2242.6	2359.7	2477.4
	32.6%	*32.0%*	*31.7%*	*31.2%*
Budget balance	-276.1	-283.7	-282.0	-252.1

[Adapted source:www.treasury.gov.za]

Use the information in TABLE 6 and TABLE 7 above to answer the questions that follow.

3.2.1 Use TABLE 6 to calculate the total Tax revenue received for the year 2023/24. (2)

3.2.2 Determine what percentage is Personal income tax of the total Tax revenue received. (3)

3.2.3 Determine if the Budget balance for 2023/24 is a Surplus or Deficit. Give a reason for your answer. (3)

3.2.4 Calculate the percentage change in Expenditure from 2022/23 to 2023/24. (4)

3.2.5 Determine the value of **A** if the total medium-term estimates is 8 154,7 billion. (3)

[25]

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QUESTION 4

4.1

TABLE 8 below shows the following types of crimes experienced by households reported by statistics SA in 2022/23.

TABLE 8: TYPES OF CRIME EXPERIENCED BY HOUSEHOLDS IN 2022/23



Use the information in TABLE 8 above to answer the questions that follow.

4.1.1 Write down the modal crime percentage. (2)

4.1.2 Determine the mean percentage of the households above that experience crime. (3)

4.1.3 Calculate the total households in South Africa if, 1,1 million household represent 5,7 % of the population. Round off your answer to the nearest hundred thousand. (4)

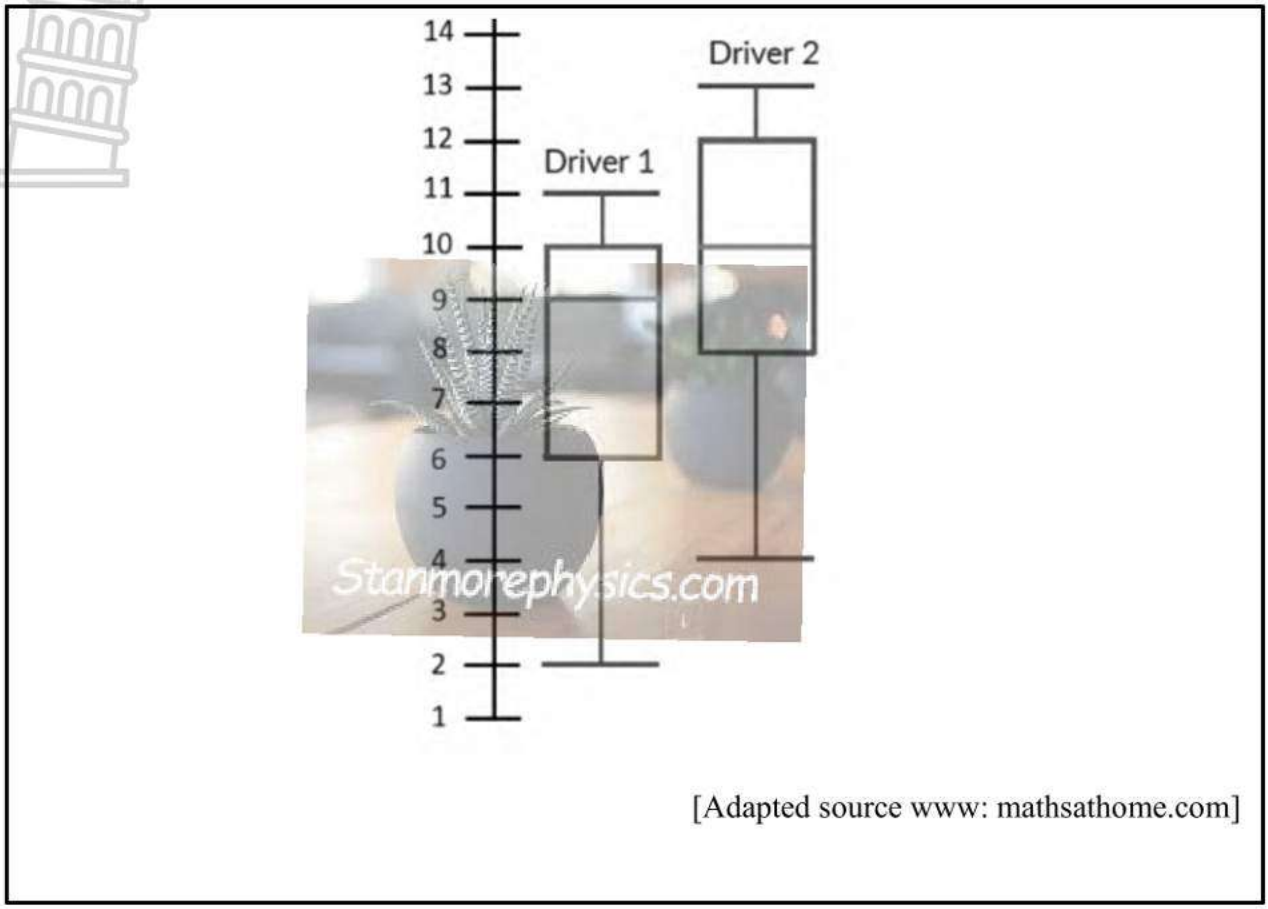
4.1.4 Determine the range in the number of crimes in TABLE 8. (3)

4.1.5 An insurance company is doing a risk assessment. The total number of households is estimated to increase to 21 100 000 in 2024. Predict the number of households in 2024 that might be affected by theft of a motor vehicle. (4)

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4.2

The box and whisker plots below show the number of deliveries made by two drivers in a day.



[Adapted source www: mathsathome.com]

Use the information above to answer the following questions.

4.2.1 Determine Quartile 2 for Driver 1. (2)

4.2.2 The interquartile range for Driver 1 and 2 is the same. Verify if this statement is correct.

You may use the formula:

IQR = Q3 – Q1 (4)

4.2.3 The maximum number of trips made by Driver 1 is less than 75% of the number of trips made by Driver 2. Verify if this statement is CORRECT. (3)

[25]

TOTAL: [100]

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ADDENDUM

MARCH 2024

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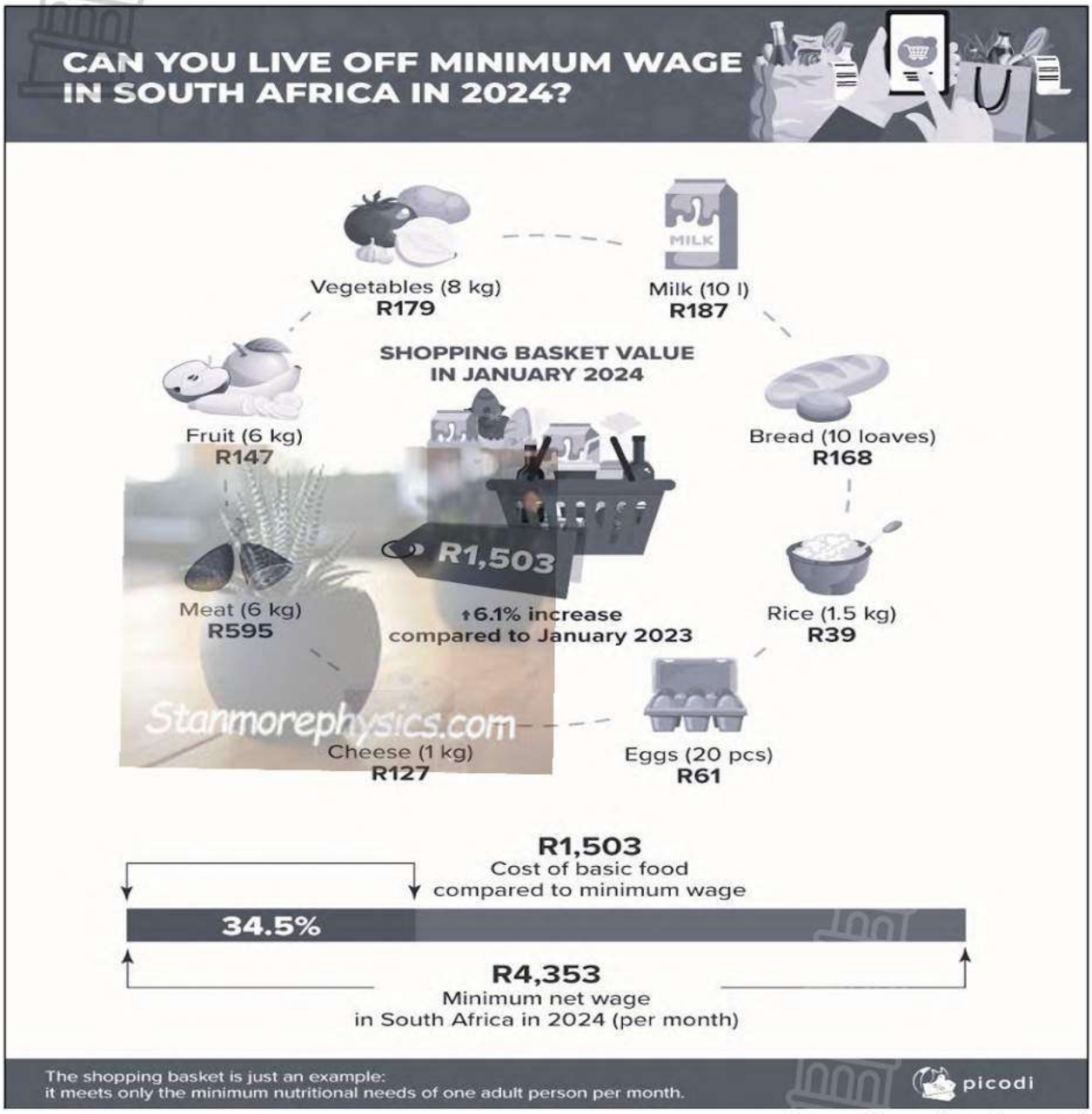
This addendum consists of 3 pages.

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ANNEXURE A

QUESTION 1.1

BASKET OF BASIC FOOD PRODUCTS FOR JANUARY 2024.



Source: [www.timeslive.co.za]

ANNEXURE B

QUESTION 1.2

TABLE 1: EXPENDITURE SUMMARY BY VOTE

2023/24 Adjustments Estimate Summary

R thousand	Main appropriation	Additional appropriation					Total additional appropriation	Adjusted appropriation
		Roll-overs	Unforeseeable/ unavoidable	Virement	Shifts	Other adjustments		
1. Office of the Premier	872 057	-	-	-	-	50 000	50 000	922 057
2. Provincial Legislature	658 734	-	-	-	-	52 707	52 707	711 441
3. Agriculture and Rural Development	2 515 153	-	-	-	-	(36 333)	(36 333)	2 478 820
4. Economic Dev., Tourism and Enviro Affairs	3 406 530	-	-	-	-	(22 147)	(22 147)	3 384 383
5. Education	60 637 286	141 195	-	-	-	2 073 466	2 214 661	A
6. Provincial Treasury	678 910	-	-	-	-	(15 000)	(15 000)	663 910
7. Health	50 687 512	-	-	-	-	1 092 615	1 092 615	51 780 127
8. Human Settlements	4 342 997	418 302	-	-	-	(417 182)	1 120	4 344 117
9. Community Safety and Liaison	250 608	-	-	-	-	120 948	120 948	371 556
10. Sport, Arts and Culture	1 492 804	-	-	-	-	(26 993)	(26 993)	1 465 811
11. Co-operative Governance and Traditional Affairs	2 443 013	2 496	-	-	-	(10 000)	(7 504)	2 435 509
12. Transport	12 966 847	31 812	-	-	-	82 807	114 619	13 081 466
13. Social Development	3 260 255	-	-	-	-	35 821	35 821	3 296 076
14. Public Works	1 738 955	-	-	-	-	475 000	475 000	2 213 955
Sub-total	**145 951 661**	**593 805**	**-**	**-**	**-**	**3 455 709**	**4 049 514**	**150 001 175**
Statutory payments	89 303	-	-	-	-	5 367	5 367	94 670
Total	**146 040 964**	**593 805**	**-**	**-**	**-**	**3 461 076**	**4 054 881**	**150 095 845**

(Adapted from www.kzntreasury.gov.za)

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