



DEPARTMENT OF EDUCATION
DEPARTEMENT VAN ONDERWYS
LEFAPHA LA THUTO
ISEBE LEZEMFUNDO

**PROVINSIALE VOORBEREIDENDE EKSAMEN/
PROVINCIAL PREPARATORY EXAMINATION**

GRAAD/GRADE 12

**WISKUNDIGE GELETTERDHEID/
MATHEMATICAL LITERACY**

VRAESTEL/PAPER 1

SEPTEMBER 2025

PUNTE/MARKS: 150

TYD/TIME: 3 uur/hours

**Hierdie vraestel bestaan uit 12 bladsye en 'n 19 bladsy- SPESIALE ANTWOORDEBOEK./
This question paper consists of 12 pages and a 19-page SPECIAL ANSWER BOOK.**

INSTRUCTION AND INFORMATION

1. This question paper consists of FIVE questions.
2. Answer ALL the questions in the SPECIAL ANSWER BOOK provided.
3. You may use an approved calculator (non-programmable and non-graphical), unless stated otherwise.
4. Show ALL calculations clearly.
5. Round off ALL final answers appropriately according to the given context, unless stated otherwise.
6. Indicate units of measurement, where applicable.
7. Diagrams are NOT necessarily drawn to scale, unless stated otherwise.
8. Write neatly and legibly.



QUESTION 1

- 1.1 TABLE 1 below gives a list of concepts used in Mathematical Literacy.

TABLE 1: TERMINOLOGY USED IN MATHEMATICAL LITERACY

A	Balance
B	Profit
C	Inflation
D	Break-even point
E	VAT
F	PAYE tax
G	South African Revenue Service

Use TABLE 1 above and match the terminology with the description below. Write only the letter (A–G) next to the question numbers (1.1.1 to 1.1.4), e.g. 1.1.5 H.

- 1.1.1 Tax deducted from your earnings by your employer and sent to the South African Revenue Service (2)
- 1.1.2 Where the income and expenses graphs are the same (2)
- 1.1.3 The difference between the debits and the credits on a bank statement (2)
- 1.1.4 The general increase in the price of goods and services over time (2)

- 1.2 Mr Deck works for AiTECH, a computer company in Swellendam.

ANNEXURE A in the ANSWER BOOK shows his payslip for February 2025.

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

- 1.2.1 Write down the position that Mr Deck holds at this company. (2)
- 1.2.2 Calculate **A**, the total monthly earnings. (2)
- 1.2.3 Write the date on which Mr Deck started working at AiTECH. (2)
- 1.2.4 Write down the simplified ratio for Mr Deck's annual bonus to his annual basic salary. (3)
- 1.2.5 Determine the value of **B** to the nearest hundred rand. (3)
- 1.2.6 Write down the employer's address in Swellendam. (2)

1.3

Mr Deck is responsible for AiTECH's monthly budget for the management, sales and administration (admin) department.

The graph in ANNEXURE B in the ANSWER BOOK shows the expenses for these three departments from March to July 2024.

Use ANNEXURE B to answer the questions that follow.

1.3.1 During which month was the administration department's expenses the second highest? (2)

1.3.2 Name the type of graph used in ANNEXURE B. (2)

1.3.3 Arrange the sales figures in descending order, excluding July 2024. (3)

1.3.4 Identify the department whose monthly expenses have remained constant from March to July 2024. (2)

[31]



QUESTION 2

2.1 Tyla is a business owner in Kimberley in the Sol Plaatje Municipality.

In addition to the cost of electricity consumed (in kWh), all electricity users are also required to pay a compulsory basic charge every month.

TABLE 2 below shows the tariffs for various types of users within the Sol Plaatje Municipality from 1 July 2024.

TABLE 2: 2024/2025 ELECTRICITY TARIFFS OF SOL PLAATJE MUNICIPALITY

TYPE OF USER	USAGE (kWh)	TARIFF (VAT exclusive)	BASIC CHARGE PER MONTH 2024/2025 (VAT inclusive)
Residential	Block 1: 0 – 350	R2,88	Free
	Block 2: More than 350	R3,64	
Schools	Winter tariff per unit	R3,3744	R322,78
	Summer tariff per unit	R3,1808	
Commercial (Businesses)	Winter tariffs per unit Block 1: 0 – 1200	R3,26820	R356,93
	Winter tariffs per unit Block 2: More than 1200	R3,26620	
	Summer tariffs per unit Block 1: 0 – 1200	R3,04320	
	Summer tariffs per unit Block 2: More than 1200	R3,04320	

NOTE: All tariffs are VAT exclusive and the basic charge per month is VAT inclusive.

[Adapted from <https://shorturl.at/gYRJM>]

Use TABLE 2 and the information above to answer the questions that follow.

2.1.1 Identify the type of user for which the block tariff system will not be used. (2)

2.1.2 The basic charge per month for schools has increased by 8% from 2023/2024 to 2024/2025.

Calculate the basic charge per month for schools in 2023/2024. (3)

2.1.3 Tyla's business used 1 356 kWh of electricity during July 2024.

Calculate the total cost for the electricity used, including VAT. (8)

2.1.4 Give ONE reason why summer rates are lower than winter rates. (2)

2.2

Tyla is planning to purchase a Mercedes Benz Viano for her business through WeBuyCars. The salesperson gave her three different payment options to choose from.



TABLE 3 below shows the details on the three payment options from WeBuyCars.

TABLE 3: DIFFERENT PAYMENT OPTIONS

	Payment option 1	Payment option 2	Payment option 3
Cash Price	R1 054 900	R 1054 900	R1 054 900
Deposit	15%	14%	R105 490
Period agreement	4,5 years	5 years	6 years
Monthly premium	R26 895,23	R25 150,22	R22 560,72
Monthly admin fee (not included in monthly premium)	R145,00	R125,00	R119,00

[Adapted from <https://www.webuycars.co.za>]

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

2.2.1 Write down the payment option with the lowest monthly premium. (2)

2.2.2 Calculate the total cost of the vehicle if Tyla decides to use the hire-purchase option 3.

You may use the following formula:

$$\text{Total cost} = \text{deposit} + \text{total value of monthly premiums} + \text{admin fees} \quad (6)$$

2.2.3 Tyla stated that she would save more than R700 in total on admin fees if she chose option 1 rather than option 2.

Verify Tyla's statement, showing ALL calculations. (7)

2.2.4 Advise Tyla, by giving ONE reason, why it is a disadvantage to buy a vehicle through hire-purchase. (2)

2.3

Tyla is 34 years old and earns a monthly taxable income of R41 783 for the 2024/2025 tax year. She is not a member of a medical scheme.

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

TABLE 4: AN EXTRACT FROM THE 2024/2025 TAX TABLE

Tax Bracket	Taxable income (R)	Rates of tax
A	0 – 237 100	18% of taxable income
B	237 101 – 370 500	42 678 + 26% of taxable income above 237 100
C	370 501 – 512 800	77 362 + 31% of taxable income above 370 500
D	512 801 – 673 000	121 475 + 36% of taxable income above 512 800
E	673 001 – 857 900	179 147 + 39% of taxable income above 673 000
REBATES		
Primary: Below age 65		R17 235
Secondary: Age 65 and older		R9 444
Tertiary: Age 75 and older		R3 145
MONTHLY MEDICAL AID TAX CREDITS		
Principal member		R364
First dependant		R364
Each additional dependant		R246

[Adapted from <https://onlinetax.sagesouthafrica.co.za/Mobi/Home/TaxTables>]

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

2.3.1 Write down the minimum tax payable for tax bracket D. (2)

2.3.2 Identify the tax bracket that Tyla will use to calculate her income tax payable. (3)

2.3.3 Calculate Tyla's monthly tax payable for the 2024/2025 tax year. (6)

2.3.4 Tyla is considering joining a medical aid. She claims that she will save more than R15 000 on income tax per year if she, her husband and three children join a medical aid.

Verify whether her claim is valid, showing All calculations. (5)
[48]

VRAAG 3

During January 2025, California in the United States of America suffered from devastating wildfires.

ANNEXURE C in the ANSWER BOOK shows information about the top 10 wildfires in California over the last 35 years.

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

3.1 Name the cause of the wildfire that affected the most regions in California within a single month. (2)

3.2 Which of the following types of graphs will best represent the data in ANNEXURE C relating to the structures affected?

A Scatter plot

B Bar graph

C Histogram

(2)

3.3 Identify the second least number of structures affected by wildfires. (2)

3.4 Calculate the median number of acres that was affected by the wildfires in California. (4)

3.5 Determine the probability of randomly selecting a response type that is NOT medical. Write the answer as a decimal number, correctly rounded off to TWO decimal places. (3)

3.6 According to a firefighter, the average number of deaths was 20 during the top ten wildfires in California.

Calculate the missing value **H**. Show ALL calculations. (4)

3.7 Explain whether the mean number of acres affected is a valid indicator of the total acres affected in the top 10 wildfires in California. Give a reason for your answer. (3)

[20]

QUESTION 4

4.1

Jozene is a South African social media influencer travelling abroad to various countries and who is constantly in need of the latest information in regards to exchange rates.

She is travelling from South Africa on 31 January 2025 to make content for a local British celebrity in London. She will be paid £800.

TABLE 5 below shows different exchange rates between the South African rand (ZAR) and other currencies on 31 January 2025.

TABLE 5: EXCHANGE RATES BETWEEN DIFFERENT COUNTRIES

CURRENCY	UNITS PER ZAR	ZAR PER UNIT
South African rand (ZAR) (R)	1,00	1,00
US dollar (USD) (\$)	0,053788	18,591389
Euro (EUR) (€)	0,051610	19,376172
British pound (GBP) (£)	0,043167	23,165933
Indian rupee (INR)	4,654813	0,214831
Swiss franc (CHF) (fr.)	0,048845	X

[Adapted from <https://www.x-rates.com/table/?from=ZAR&amount=1>]

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

4.1.1 Give the name of the country that uses the Swiss franc (fr.) as their primary means of payment. (2)

4.1.2 Calculate the value of the exchange rate **X**. (2)

4.1.3 Calculate the amount in South African rand (ZAR value) that Jozene will receive for the work she has done in London. (3)

4.1.4 Jozene also did work in India. The income she earned in India was $\frac{3}{4}$ of the income, in rand (ZAR), for the work she did in London. Her husband Johan stated that she was paid over 60 000 Indian rupees (INR) for the work she did in India.

Verify Johan's statement, showing ALL calculations. (5)

4.2

Jozone has experienced many flight delays to date.

ANNEXURE D in the ANSWER BOOK shows two box and whisker diagrams, indicating flight delay times (in hours) caused by planes arriving late or extreme weather conditions.

Use ANNEXURE D to answer the following questions.

- 4.2.1 Determine the maximum hours delay due to planes arriving late. (2)
- 4.2.2 Determine the median number of hours delay due to extreme weather conditions. (2)
- 4.2.3 Write down the percentage of flights that were delayed for 12 hours or more due to extreme weather conditions. (2)
- 4.2.4 Determine the difference (in hours) in the interquartile range (IQR) between flights delayed due to planes arriving late and flights delayed because of extreme weather conditions. (6)
- [24]**



QUESTION 5

- 5.1 TABLE 6 below shows various departments in the Northern Cape's expenditure (in thousands of rand) for seven years.

TABLE 6: EXPENDITURE (IN THOUSANDS OF RAND)			
Year(s)	Basic Education	Health	Social Protection
2018/19	211 342	180 052	195 091
2019/20	215 194	183 944	182 704
2020/21	215 221	198 736	200 922
2021/22	216 488	195 091	195 091
2022/23	217 168	188 694	204 132
2023/24	207 410	195 091	170 689
2024/25	201 214	171 982	195 091

[Aangepas vanuit: <https://lmi-research.org.za>]

Use TABLE 6 to answer the questions that follow.

- 5.1.1 Identify the department and the year(s) when the expenditure was R170 689 000. (2)
- 5.1.2 Determine the mode and write it out in full. (3)
- 5.1.3 The graph in the ANSWER BOOK shows the comparison between the expenditure of the different departments. (4)
- Complete the social protection graph from 2021/22 to 2024/25 using the values in TABLE 6.

5.2

The Independent Communications Authority of South Africa (ICASA) regulates both the telecommunications and broadcasting sectors in public interest.

TABLE 7 below shows the employment levels for the three sectors regulated by ICASA.

TABLE 7: EMPLOMENT LEVELS IN THREE SECTORS FROM 2019 TO 2023				
Year	SEKTOR			Total Employment
	Tele-communication	Postal Services	Broadcasting	
2019	33 782	18 464	4 463	56 709
2020	M	17 984	4 237	—
2021	22 055	18 363	3 444	43 862
2022	32 280	16 792	3 552	52 624
2023	30 862	15 303	3 572	49 737

[Adapted from <https://www.icasa.org.za>]

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

5.2.1 Calculate the percentage increase in the total employment of the broadcasting sector from 2022 to 2023.

You may use the following formula:

$$\text{Percentage increase} = \frac{\text{Employment 2023} - \text{Employment 2022}}{\text{Employment 2022}} \times 100 \quad (3)$$

5.2.2 The range employment of telecommunication from 2019 to 2023 were 12 274.

Determine the missing value M, the highest number of employment for the five years. (4)

5.2.3 During 2021, the total number of offices for the respective sectors was as follows:

SECTOR	NUMBER OF OFFICES
Broadcasting	106
Postal Service	485
Telecommunication	718

Determine the average number of employees per office in the broadcasting sector during 2021. (3)

5.2.4 Determine the probability as a percentage, of randomly selecting an employment figure across all sectors that is more than 18 000. (4)

5.2.5 Describe the trend in the number of workers in the broadcasting sector from 2019 to 2023. (4)

[27]

TOTAL: 150



Northern Cape
Department of Education

**Provincial Preparatory Examination/
Provinsiale Voorbereidende Eksamen**

September 2025

Answer Book/Antwoordeboek

SCHOOL
SKOOL

CENTRE NUMBER
SENTRUMNOMMER

LEARNER'S NAME
LEERDER SE NAAM

LEARNER'S SURNAME
LEERDER SE VAN

DATE
DATUM

12 September 2025

BOOK NUMBER
BOEKNOMMER

OF
VAN

BOOKS
BOEKE

SUBJECT CODE
VAKKODE

M L I T

PAPER NUMBER
VRAESTELNOMMER

1

SUBJECT NAME
VAKNAAM

Mathematical Literacy

Learner's Class
Leerder se Klas

Question
Vraag

MARKS OBTAINED/PUNTE BEHAAL

Teacher
Onderwyser

Moderator – School
Moderator – Skool

Moderator – District
Moderator – Distrik

Moderator – Province
Moderator – Provinsie

Moderator – National
Moderator – Nasionaal

TOTAL
TOTAAL

Percentage
Persentasie

Level
Vlak

Signature
Handtekening

Date
Datum

READ THE INSTRUCTIONS ON THE NEXT PAGE./LEES DIE INSTRUKSIES OP DIE VOLGENDE BLADSY.

This answer book consists of 19 pages./Hierdie antwoordeboek bestaan uit 19 bladsye.

FOLLOW THESE INSTRUCTIONS CAREFULLY	VOLG HIERDIE INSTRUKSIES NOUKEURIG
- Clearly write your name, surname and class in the space provided. - Answer ALL the questions in the spaces provided. - No pages may be torn from this answer book. - Read the instructions in the question paper carefully. - Candidates may not retain any answer book or remove them from the examination room. - Answers must be written in dark pencil or blue ink as distinctly as possible. - Write the numbers of the questions you have answered on the front cover of the answer book where marks are to be recorded. - If you require additional space for your answers: - Use the additional space provided at the end of the answer book. - When answering a question in the additional space, clearly indicate the question number in the column on the left-hand side. - Draw a neat line through any work/rough work that must not be marked.	- Skryf jou naam, van en klas in die ruimtes soos verskaf. - Beantwoord ALLE vrae in die ruimtes wat voorsien word. - Geen bladsye mag uit hierdie antwoordeboek geskeur word nie. - Lees die instruksies op die eksamenvraestel sorgvuldig deur. - Kandidate mag nie antwoordeboeke hou of uit die eksamenlokaal verwyder nie. - Antwoorde moet so duidelik moontlik met 'n donker potlood of blou ink geskryf word. - Skryf die nommers van die vrae wat jy beantwoord het op die voorblad van die antwoordeboek waar die punte aangebring word. - Ingeval jy bykomende ruimte benodig vir jou antwoorde: - Gebruik die bykomende ruimte wat aan die einde van die antwoordeboek voorsien word. - As 'n vraag in die bykomende ruimte beantwoord word, dui duidelik die vraagnommer in die kolom aan die linkerkant aan. - Trek 'n netjiese streep deur enige werk/rofwerk wat nie nagesien moet word nie.

QUESTION 1

	Solution	Marks
1.1.1		(2)
1.1.2		(2)
1.1.3		(2)
1.1.4		(2)

1.2 ANNEXURE A

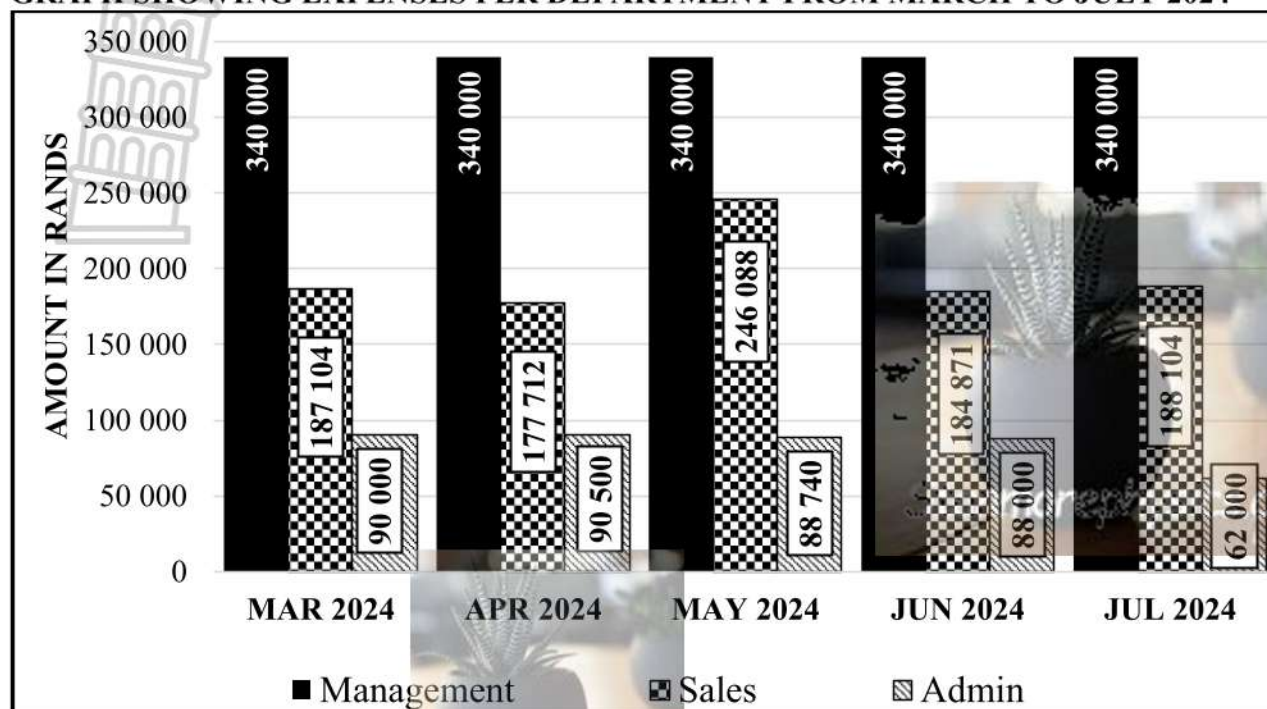
AiTECH (Pty) Limited 152 Petunia Street, Railton, Swellendam 6470 Registration No.: 2011 524 333 Telephone No.: 083 587 1444		PAY SLIP 	
		Payslip Number	2025144
		Payment Date	2025/02/2025
		Pay Period Number	12
		Gross Annual Salary	R2 230 000
Employee Details			
Employee Name	G Deck		
Address	Gazania 147, Railton, Swellendam 6470		
Employee Number	EXS001	ID Number	660329 507 620
Employment Date	2012/03/01	Tax Number	335 586 814
Job Title	Chief Executive Officer (CEO)		
Monthly Pay for February 2025		Year-to-date Total	
Earnings		Annual Earnings	
Basic Salary	R150 000,00	Basic Salary	R1 800 000,00
Travel Allowance – Fixed	R15 000,00	Travel Allowance – Fixed	R180 000,00
Bonus – Annual	–	Bonus – Annual	R250 000,00
Total	A	Total	R2 230 000,00
Deductions		Annual Deductions	
Income Tax	R39 910,10	Income Tax	R581 421,55
Unemployment Insurance	R177,12	Unemployment Insurance	R2 125,44
Pension Fund	R27 540,00	Pension Fund	R375 480,00
Medical Aid	R2 020,00	Medical Aid	B
Total	R69 647,22	Total	R983 266,64
Net Pay for February 2025	R95 352,78	Year-to-date Net Pay	R1 246 733,36

[Adapted from <https://www.simplepay.co.za>]

	Solution	Marks
1.2.1		(2)
1.2.2		(2)
1.2.3		(2)
1.2.4		(3)
1.2.5		(3)
1.2.6		(2)

1.3 ANNEXURE B

GRAPH SHOWING EXPENSES PER DEPARTMENT FROM MARCH TO JULY 2024



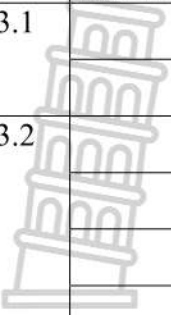
[Adapted from <https://www.excel-skills.com/management-accounts>]

	Solution	Marks
1.3.1		
		(2)
1.3.2		
		(2)
1.3.3		
		(3)
1.3.4		
		(2)
		[31]

QUESTION 2

	Solution	Marks
2.1.1		(2)
2.1.2		(3)
2.1.3		(8)
2.1.4		(2)

	Solution	Marks
2.2.1		(2)
2.2.2		(6)
2.2.3		(7)
2.2.4		(2)

	Solution	Marks
2.3.1		(2)
2.3.2		
		(3)
2.3.3	 Stanmorephysics.com	(6)
2.3.4		(5)
		[48]

QUESTION 3**ANNEXURE C****TOP 10 WILDFIRES IN CALIFORNIA OVER THE LAST 35 YEARS**

	NAME OF FIRE (CAUSE)	DATE	REGION/S AFFECTED	ACRES AFFECTED	STRUCTURES AFFECTED	DEATHS
1	CAMP (Power lines)	November 2018	Butte	153 336	18 804	85
2	EATON (Under investigation)	January 2025	Los Angeles	14 021	19 418	17
3	PALISADES (Under investigation)	January 2025	Los Angeles	23 448	6 834	11
4	TUBBS (Electrical)	October 2017	Napa & Sonoma	36 807	5 636	22
5	TUNNEL – Oakland Hills (Electrical)	October 1991	Alameda	178 855	2 900	H
6	CEDAR (Human-related)	October 2003	San Diego	273 246	2 820	16
7	NORTH COMPLEX (Electrical)	August 2020	Butte, Plumas & Yuba	318 935	2 352	15
8	VALLEY (Lightning)	September 2015	Lake, Napa, Sonoma & Yountville	76 067	1 955	4
9	WITCH (Power lines)	October 2007	San Diego	197 990	1 650	2
10	WOOLSEY (Electrical)	November 2018	Ventura	96 949	1 643	3

RESPONSE TYPES IN 2025

Wildfires	Structural fires	Other fires	Medical	Hazardous materials	Law enforcement	Public service
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[Adapted from <https://www.fire.ca.gov/our-impact/statistics>]

	Solution	Marks
3.1		(2)
3.2		(2)
3.3		(2)
3.4		(4)
3.5		(3)
3.6		(4)
3.7		(3)
		[20]

QUESTION 4

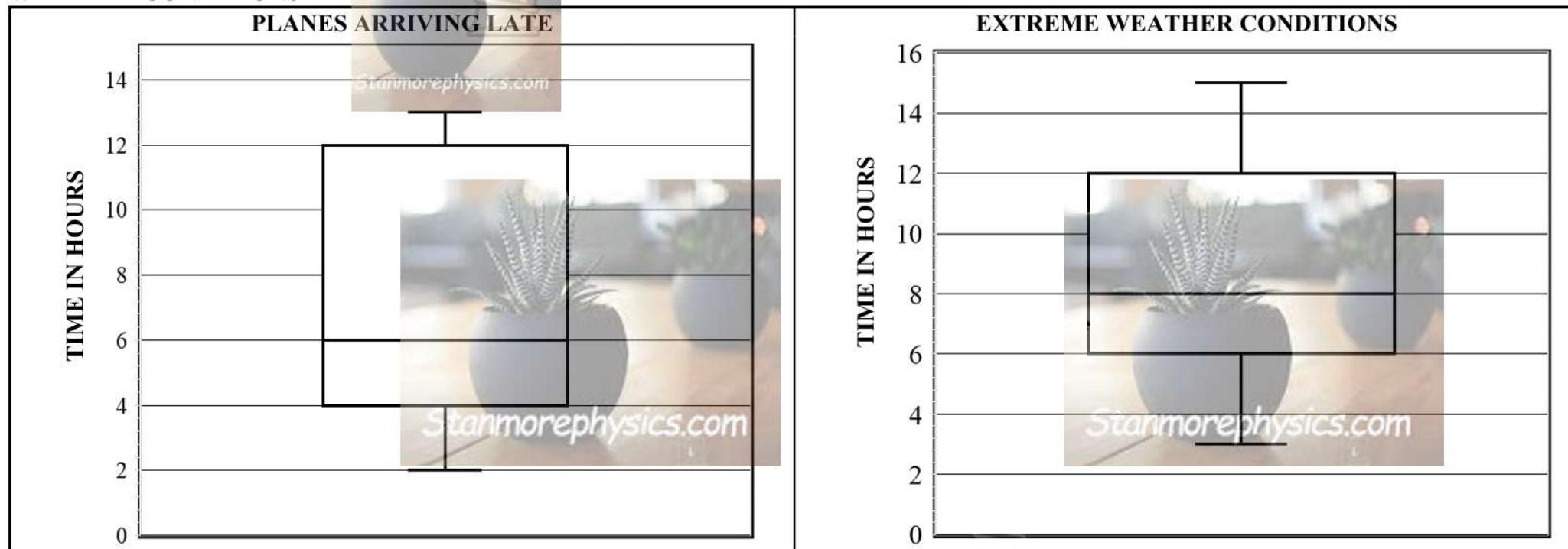
	Solution	Marks
4.1.1		
		(2)
4.1.2		
		(2)
4.1.3		
		(3)
4.1.4		
		(5)



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4.2 ANNEXURE D

BOX AND WHISKER DIAGRAMS SHOWING FLIGHT DELAYS (IN HOURS) DUE TO PLANES ARRIVING LATE OR EXTREME WEATHER CONDITIONS



[Adapted from <https://www.transtats.com>]

	Solution	Marks
4.2.1		(2)
4.2.2		(2)
4.2.3		(2)
4.2.4		(6)
		(6)
		[24]

QUESTION 5

Solution	Marks
5.1.1	(2)
5.1.2	
	(3)

5.1.3

EXPENDITURE (IN THOUSANDS OF RAND)



(4)

	Solution	Marks
5.2.1		
5.2.2		(3)
5.2.3		(4)
5.2.4		(3)
5.2.5		(4)
		[27]





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150



DEPARTMENT OF EDUCATION
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**PROVINCIAL PREPARATORY EXAMINATION/
*PROVINSIALE VOORBEREIDENDE EKSAMEN***

GRADE/GRAAD 12

**MATHEMATICAL LITERACY/
*WISKUNDIGE GELETTERDHEID***

PAPER/VRAESTEL 1

SEPTEMBER 2025

MARKING GUIDELINES/NASIENRIGLYNE

MARKS/PUNTE: 150

**These marking guidelines consist of 19 pages./
*Hierdie nasienriglyne bestaan uit 19 bladsye.***

Symbol/Kode	Explanation/Verduideliking
MA	Method with accuracy/Metode met akkuraatheid
CA	Consistent accuracy/Volgehoue akkuraatheid
A	Accuracy/Akkuraatheid
C	Conversion/Herleiding
S	Simplification/Vereenvoudiging
RT	Reading from a table/graph/document/diagram/ Lees vanaf tabel/grafiek/dokument/diagram
SF	Correct substitution in a formula/Korrekte vervanging in 'n formule
O	Opinion/Explanation/Opinie/Verduideliking
P	Penalty, e.g. for no units, incorrect rounding off, etc./ Penalisering, bv. vir geen eenhede, verkeerde afronding, ens.
R	Rounding off/Afronding
NPR	No penalty for rounding/Geen penalisasie vir afronding nie
NPU	No penalty for omitting correct unit/ Geen penalisering vir uitlaat van die korrekte eenheid nie.
AO	Answer only/Slegs antwoord
MCA	Method with consistent accuracy/Metode met volgehoue akkuraatheid
RCA	Rounding consistent with accuracy/Afronding met volgehoue akkuraatheid

NOTE:

- If a learner answers a question TWICE, only mark the FIRST attempt.
- If a learner 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 or break-down.
- If the learner presents any extra solution when reading from a graph, table, layout plan and map, then penalise for every extra item presented.
- Rounding is an independent mark.
- General principle of marking: If the learner makes one mistake, one mark is deducted.
- A conclusion mark can only be awarded if relevant calculations of at least $\frac{1}{3}$ of the maximum mark of the subquestion has been awarded.
- No penalty for rounding (NPR) if the first decimal is correct, except questions involving money.

LET WEL:

- As 'n leerder 'n vraag TWEE KEER beantwoord, sien slegs die EERSTE poging na.
- As 'n leerder 'n antwoord van 'n vraag doodtrek (kanselleer) en nie oordoen nie, sien die doodgetrekte (gekanselleerde) poging na.
- Volgehoue akkuraatheid (CA) word in ALLE aspekte van die nasienriglyne toegepas; dit hou egter op by die tweede berekeningsfout of 'break-down'.
- Wanneer 'n leerder aflesings vanaf 'n grafiek, tabel, uitlegplan en kaart neem en ekstra antwoorde gee, penaliseer vir elke ekstra item.
- Afronding tel as 'n afsonderlike punt.
- Die algemene beginsel van nasien: As 'n leerder een fout maak, word een punt afgetrek.
- 'n Gevolgtrekkingspunt kan slegs gegee word indien relevante berekening van ten minste $\frac{1}{3}$ van die maksimumpunt van die subvraag toegeken is.
- Geen penalisering vir ronding (NPR) as die eerste desimaal korrek is nie, behalwe as vrae geld insluit.

QUESTION/VRAAG 1 [31 MARKS/PUNTE] ANSWER ONLY: FULL MARKS/SLEGS ANTWOORD: VOLPUNTE			
Q/V	Solution/Oplossing	Explanation/Verduideliking	T&L
1.1.1	✓✓A F OR/OF PAYE tax/LBS-belasting	2A correct option (2)	F L1
1.1.2	✓✓A D OR/OF Break-even point/Gelykbreekpunt	2A correct option (2)	F L1
1.1.3	✓✓A A OR/OF Balance/Balans	2A correct option (2)	F L1
1.1.4	✓✓A C OR/OF Inflation/Inflasie	2A correct option (2)	F L1
1.2.1	CEO/HUB ✓✓RT OR/OF ✓✓RT Chief Executive Officer/Hoof- Uitvoerende Beampte	2RT correct position (2)	F L1
1.2.2	Total monthly earnings/ Totale maandelikse verdienste = R150 000 + R15 000 ✓MA = R165 000 ✓A OR/OF = R95 352,78 + R69 647,22 ✓MA = R165 000 ✓A	1MA adding correct values 1A simplification 1MA adding correct values 1A simplification (2)	F L1
1.2.3	2012/03/01 ✓✓A OR/OF 1 March 2012/1 Maart 2012 ✓✓A OR/OF 01/03/2012 ✓✓A	2A correct full date (2)	F L1
1.2.4	✓RT 250 000 : 1 800 000 ✓RT 5 : 36 ✓A	1RT correct value 1RT correct value 1A simplification in correct order (3)	F L1

* 1.2.5	Value of B/Waarde van B ✓MA $= R983\,266,64 - (R581\,421,55 + R2\,125,44 + R375\,480)$ $= R24\,239,65$ ✓A $\approx R24\,200$ ✓R	1MA subtracting correct values 1A simplification 1R rounding to nearest hundred rand (3)	F L1
1.2.6	✓✓RT 152 Petunia Street/Petuniastraat 152	2RT correct street address (2)	F L1
* 1.3.1	March/Maart ✓✓A	2A correct month (2)	D L1
1.3.2	Multiple bar graph/Saamgestelde staafgrafiek ✓✓A  OR/OF Compound bar graph/Meervoudige staafgrafiek ✓✓A	2A correct graph Accept: Triple bar graph – full marks (2)	D L1
* 1.3.3	Descending order/Dalende orde ✓✓RT 246 088; 187 104; 184 871; 177 712 ✓MA	2RT correct values excluding July 2024 1MA descending order (3)	D L1
* 1.3.4	Management/Bestuur ✓✓RT	2RT correct department (2)	D L1
		[31]	

QUESTION/VRAAG 2 [48 MARKS/PUNTE]

Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L
2.1.1	✓✓ RT Schools/Skole	2RT correct user (2)	F L1
2.1.2	Schools basic charge 2023/2024/ Skole basiese heffing 2023/2024 ✓ RT $= R322,78 \times \frac{100}{108}$ ✓MA $= R298,8703704$ $= R298,87$ ✓CA OR/OF ✓ RT $= R322,78 \div 1,08$ ✓MA $= R298,87$ ✓CA	1RT schools basic charge 2024/2025 1MA multiply by $\frac{100}{108}$ 1CA simplification Stanmorephysics.com 1RT schools basic charge 2024/2025 1MA dividing by 1,08 1CA simplification (3)	F L2

* 2.1.3	Cost VAT excluded/<i>Koste BTW uitgesluit</i> ✓MA ✓RT ✓A 0-1 200 1 200 kWh × R3,26820 = R3 921,84 >1200 156 kWh × R3,26620 = R509,5272 = R3 921,84 + R509,5272 = R4 431,3672 ✓CA Cost VAT included/<i>Koste BTW ingesluit</i> = R4 431,3672 × $\frac{115}{100}$ ✓MCA × 115% = R5 096,07 ✓CA Total cost/<i>Totale koste</i> = R5 096,07 + R356,93 ✓MCA = R5 453,00 ✓CA OR/OF Cost VAT excluded/<i>Koste BTW uitgesluit</i> ✓MA ✓RT ✓A 0-1 200 1 200 kWh × R3,26820 = R3 921,84 >1200 156 kWh × R3,26620 = R509,5272 = R3 921,84 + R509,5272 = R4 431,3672 ✓CA Cost VAT included/<i>Koste BTW ingesluit</i> = R4 431,3672 × $\frac{15}{100}$ ✓MCA = R664,71 = R4 431,3672 + R664,71 = R5 096,07 ✓CA Total cost/<i>Totale koste</i> = R5 096,07 + R356,93 ✓MCA = R5 453,00 ✓CA OR/OF	1MA both correct kWh 1RT both correct tariffs 1A simplification for both values 1CA simplification 1MCA multiplying with $\frac{115}{100}$ 1CA simplification 1MCA adding the basic charge 1CA simplification OR/OF 1MA both correct kWh 1RT both correct tariffs 1A simplification for both values 1CA simplification 1MCA multiplying with $\frac{15}{100}$ and adding to the VAT excluding 1CA simplification 1MCA adding the basic charge 1CA simplification OR/OF	F L3
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	Cost VAT excluded/<i>Koste BTW uitgesluit</i> ✓MA ✓RT ✓A 0-1 200 1 200 kWh × R3,26820 = R3 921,84 >1200 156 kWh × R3,26620 = R509,5272 = R3 921,84 + R509,5272 = R4 431,3672 ✓CA Cost VAT included/<i>Koste BTW ingesluit</i> = R4 431,3672 × 1,15 ✓MCA = R5 096,07 ✓CA Total cost/<i>Totale koste</i> = R5 096,07 + R356,93 ✓MCA = R5 453,00 ✓CA	1MA both correct kWh 1RT both correct tariffs 1A simplification both values 1CA simplification 1MCA multiplying with 1,15 1CA simplification 1MCA adding the basic charge 1CA simplification (8)	
2.1.4	The demand for electricity is less in the summer months./<i>Die vraag na elektrisiteit is minder in die somer maande.</i> ✓✓ O OR/OF Less heating required/<i>Minder verhitting nodig</i> ✓✓ O OR/OF More daylight hours/<i>Meer dagligure</i> ✓✓ O OR/OF Less electricity used/<i>Minder kragverbruik</i> ✓✓ O (Any relevant correct reason)	2O correct reason (2)	F L4
* 2.2.1	Payment Option/<i>Betalingopsie</i> 3 ✓✓ RT	2RT payment option (2)	F L1
* 2.2.2	Total number of months/<i>Totale aantal maande</i> 6 × 12 = 72 ✓A Total cost/<i>Totale koste</i> ✓SF ✓SF ✓SF = R105 490 + (R22 560,72 × 72) + (R119,00 × 72) = R105 490 + R1 624 371,84 + R8 568 ✓MCA = R1 738 429,84 ✓CA	1A correct number of months 1SF deposit 1SF correct premium 1SF correct admin fee 1MCA adding values 1CA total cost (6)	F L3

2.2.3	Total admin fee option 1/ <i>Totale administrasiefooi opsie 1</i> ✓RT = R145 × 54 ✓MA = R7 830 ✓CA Total admin fee option 2/ <i>Totale administrasiefooi-opsie 2</i> = R125 × 60 ✓MA = R7 500 ✓CA Difference/<i>Verskil</i> = R7 830 – R7 500 = R 330 ✓MCA Her statement is NOT VALID/ <i>Haar bewering is NIE GELDIG NIE.</i> ✓O	1RT correct admin fee 1MA multiply by 54 months 1CA total admin fee option 1 1MA multiply admin fee by 60 months 1CA correct admin fee option 2 1MCA calculating difference 1O opinion (7)	F L4
2.2.4	Interest is charged/<i>Rente word gehef</i> ✓✓O OR/OF Higher overall cost/<i>Groter totale koste</i> ✓✓O OR/OF No ownership until full payment/ <i>Geen eienaarskap voor volle betaling</i> ✓✓O (Any correct reason)	2O correct reason (2)	F L4
* 2.3.1	Minimum tax payable/<i>Minimim belasting betaalbaar</i> = R121 475 ✓✓RT	2RT correct minimum tax (2)	F L1
* 2.3.2	Annual taxable income/<i>Jaarlikse belasbare inkomste</i> = R41 783 × 12 ✓MA = R501 396 ✓A Tax bracket C/<i>Belastingkerf C</i> ✓MCA	1MA multiply taxable income by 12 1A simplification 1MCA tax bracket C AO (3)	F L2

2.3.3	Tax before repate/<i>Belasting voor korting</i> = R77 362 + 31% (R501 396 - R370 500) ✓ SF = R77 362 + 31% (R130 896) = R77 362 + R40 577,76 ✓ MCA = R117 939,76 ✓ CA Monthly tax payable/<i>Maandelikse belasting betaalbaar</i> = R117 939,76 – R17 235 ✓ MCA = R100 74,76 ÷ 12 ✓ MCA = R8 392,06 ✓ CA	CA from 2.3.2 1SF correct substitution 1MCA adding values 1CA simplification 1MCA subtracting rebate 1MCA yearly tax dividing by 12 1CA simplification (6)	F L3
2.3.4	Yearly medical aid tax credits/ <i>Jaarlikse mediesefondsbelastingkrediete</i> ✓ MA ✓ MA = (R364 × 2) + (R246 × 3) = R728 + R738 = R1 466 × 12 ✓ MCA = R17 592 ✓ CA Her statement is VALID/ <i>Haar bewering is GELDIG</i>	1MA principal member and first dependant 1MA three children 1MCA total monthly medical credit multiply by 12 1CA simplification 1O opinion (5)	F L4
		[48]	

QUESTION/VRAAG 3 [20 MARKS/PUNTE]			
Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L
3.1	Lightning/Weerlig ✓✓ RT	2RT cause of fire (2)	D L1
3.2	B ✓✓ A OR/OF bar graph/staafgrafiek ✓✓ A	2A correct option (2)	D L1
3.3	1 650 ✓✓ RT	2RT correct structures (2)	D L1
3.4	Median/Mediaan ✓A 14 021; 23 448; 36 807; 76 067; 96 949; 153 336; 178 855; 197 990; 273 246; 318 935 ✓A $= \frac{96\,949 + 153\,336}{2}$ ✓MA $= 125\,142,5$ ✓CA	1A arranging all the correct values (any order) 1A finding middle values 1MA concept of median 1CA simplification (Accept 125 142 OR 125 143) (4)	D L2
3.5	Probability (not medical)/Waarskynlikheid (nie-medies) $= \frac{6}{7}$ ✓A $= 0,86$ ✓CA	1A correct numerator 1A correct denominator 1CA simplification correct to 2 decimals (3)	P L2

3.6	Value of H/Waarde van H $20 = \frac{85+17+11+22+H+16+15+4+2+3}{10}$ $20 = \frac{175+H}{10}$ $H = (20 \times 10) - 175$ $H = 25$ ✓MA ✓MA ✓MCA ✓CA Stanmorephysics.com OR/OF $20 = \frac{85+17+11+22+H+16+15+4+2+3}{10}$ $20 = \frac{175+H}{10}$ $H = (20 \times 10) - 175$ $H = 25$ ✓MA ✓MA ✓MCA ✓CA Stanmorephysics.com OR/OF $H = (20 \times 10) - 175$ $= 25$ ✓MA ✓MA ✓MCA ✓CA OR/OF $H = 200 - 175$ $= 25$ ✓MA ✓MA ✓MCA ✓CA	1MA concept of mean 1MA add remaining values 1MCA changing the subject of the formula 1CA simplification 1 MA concept of mean 1MA add remaining values 1MCA changing the subject of the formula 1CA simplification 1MA concept of mean 1MA add remaining values 1MCA changing the subject of the formula 1CA simplification 1MA concept of mean 1MA add remaining values 1MCA changing the subject of the formula 1CA simplification (4)	D L3
3.7	No/Nee ✓A ✓✓O The mean is not valid because the data includes outliers (extreme values) which skewes the central tendency of the majority data./Nee, die gemiddelde is nie geldig nie omdat die data uitskieters (uiterste waardes) insluit wat die sentrale neiging van die meerderheidsdata skeeftrek.	1A opinion 2O reason (3) [20]	D L4

QUESTION/VRAAG 4 [24 MARKS/PUNTE]			
Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L
4.1.1	Switzerland/Switserland ✓✓A	2A correct country (2)	F L1
4.1.2	$X = \frac{1}{0,048845} \quad \checkmark \text{MA}$ $X = 20,47292456 \quad \checkmark \text{A}$	1MA dividing by exchange rate 1A simplification (NB: Accept minimum 4 decimal places – penalty of 1 mark if not so) (2)	F L2
4.1.3	Amount in rands/Bedrag in rand $\checkmark \text{RT}$ $= 800 \times 23,165933 \quad \checkmark \text{MA}$ $= \text{R}18\,532,75 \quad \checkmark \text{CA}$ OR/OF $\checkmark \text{RT}$ $= 800 \div 0,043167 \quad \checkmark \text{MA}$ $= \text{R}18\,532,68 \quad \checkmark \text{CA}$	1RT value in pounds $1\text{MA} \times 23,165933$ 1CA simplification 1RT value in pounds $1\text{MA} \div 0,043167$ 1CA simplification (3)	F L2

4.1.4	Income earned in ZAR/<i>Inkomste verdien in ZAR</i> $= R18\,532,75 \times \frac{3}{4} \quad \checkmark \text{MCA}$ $= R13\,899,56 \quad \checkmark \text{CA}$ $= R18\,532,68 \times \frac{3}{4}$ $= R13\,899,51$ Income earned in Indian Rupee/<i>Inkomste verdien in Indiese Roopee</i> $= R13\,899,56 \times 4,654813 \quad \checkmark \text{MCA}$ $= \text{INR } 64\,699,85 \quad \checkmark \text{CA}$ $= R13\,899,51 \times 4,654813$ $= \text{INR } 64\,699,62$ His statement is VALID./<i>Sy stelling is GELDIG.</i> $\checkmark \text{O}$ OR/OF Income earned in ZAR/<i>Inkomste verdien in ZAR</i> $= R18\,532,75 \times \frac{3}{4} \quad \checkmark \text{MCA}$ $= R13\,899,56 \quad \checkmark \text{CA}$ $= R18\,532,68 \times \frac{3}{4}$ $= R13\,899,51$ Income earned in Indian Rupee/<i>Inkomste verdien in Indiese Roopee</i> $= R13\,899,56 \div 0,214831 \quad \checkmark \text{MCA}$ $= \text{INR } 64\,699,97 \quad \checkmark \text{CA}$ $= R13\,899,51 \div 0,214831$ $= \text{INR } 64\,699,74$ His statement is VALID./<i>Sy stelling is GELDIG.</i> $\checkmark \text{O}$	CA from 4.1.3 MCA $\times \frac{3}{4}$ 1CA simplification 1MCA $\times 4,654813$ 1CA simplification 1O opinion MCA $\times \frac{3}{4}$ 1CA simplification 1MCA $\div 0,214831$ 1CA simplification 1O opinion (5)	F L4
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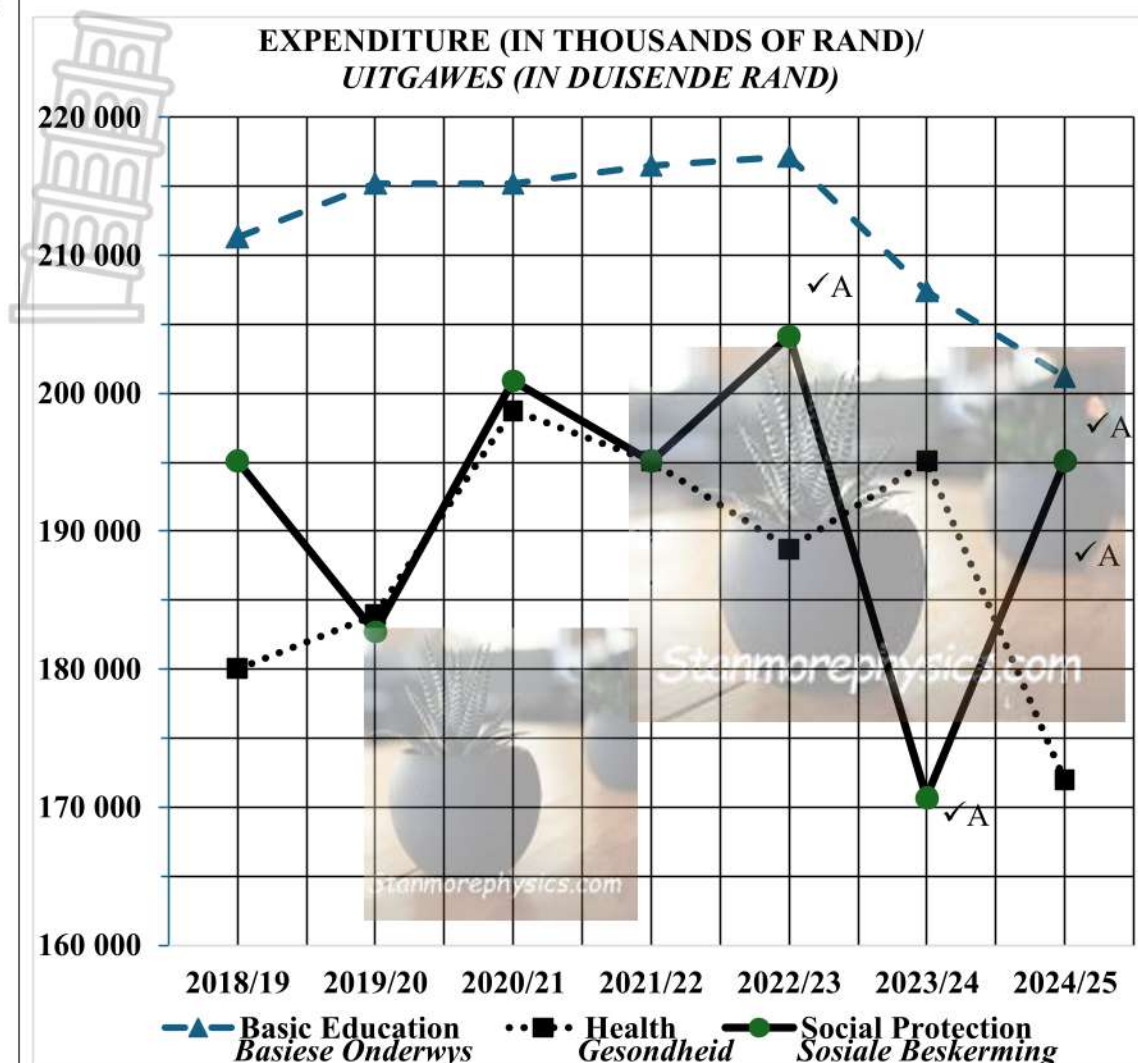
4.2.1	13 hours/uur ✓✓RT	2RT maximum hours (2)	D L1
4.2.2	8 hours/uur ✓✓RT	2RT median hours (2)	D L1
4.2.3	25% ✓✓A	2A correct percentage (2)	D L2
4.2.4	Interquartile range (IQR)/Interkwartielomvang (IKO) Plane arriving late/Vliegtuig wat laat arriveer ✓RT = 12 – 4 ✓MA = 8 ✓CA Extreme weather conditions/Uiterste weertoestande = 12 – 6 ✓RT = 6 ✓CA Difference/Verskil: = 8 – 6 = 2 ✓MCA 	1RT correct values 1MA concept of IQR 1CA simplification 1RT correct values 1CA simplification 1MCA difference in IQR (6)	D L3
		[24]	

QUESTION/VRAAG 5 [27 MARKS/PUNTE]			
Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L
5.1.1	Social Protection/Sosiale beskerming ✓RT 2023/24 ✓RT	1RT department 1RT year (Accept in any order) (2)	F L1
5.1.2	Mode/Modus ✓RT = R 195 091 × 1 000 ✓MA = R195 091 000 ✓A	1RT mode 1MA multiply by 1000 1A correct mode written out full AO full marks (3)	D L2



5.1.3

F
L3



1A (2022/23 ; 204 132)

1A (2023/24 ; 170 689)

1A (2024/25 ; 195 091)

1A joining ALL the points plotted on the graph (at least one point must be correct)
/verbind AL die punte wat op die grafiek gestip is (ten minste een punt moet korrek wees)

NOTE: Allow ± 1 mm variance on either side of the points. /

NOTA: Laat ± 1 mm-afwyking aan weerskante van die punte toe.

(4)

5.2.1	% increase/afname ✓RT $= \frac{3\,572 - 3\,552}{3\,552} \times 100\%$ ✓A $= \frac{20}{3\,552} \times 100\%$ = 0,5630630631% ✓CA	1RT correct values 1A correct denominator 1CA simplification (Accept 0,56 or 0,563) (3)	D L2
5.2.2	Range/Omvang ✓SF ✓MA 12 274 = M – 22 055 M = 12 274 + 22 055 ✓MCA M = 34 329 ✓CA	1MA for concept of range 1SF substituting correctly 1MCA adding values 1CA simplification (4)	D L2
5.2.3	Average number of employees per office/Gemiddelde getal werknemers per kantoor ✓RT = 3 444 ÷ 106 ✓MA = 32,49 = 32 or 33 employees/werknemers ✓CA	1RT for 3 444 1MA division by 106 1CA simplification rounded to the nearest whole number (3)	D L2
5.2.4	Probability/Waarskynlikheid ✓RT = $\frac{7}{15} \times 100\%$ ✓MA ✓A = 46,67% ✓CA	CA from 5.2.2 1RT number of figures above 18 000 1A correct denominator 1MA percentage calculation 1CA simplification NPU (4)	P L2
5.2.5	Trend/Tendens ✓O ✓O The number of workers decreased from 2019 to 2020./ Die aantal werkers het afgeneem vanaf 2019 tot 2020. ✓✓O From 2020, the number of workers has increased annually. Vanaf 2020 het die aantal werkers jaarliks toegeneem.	1O decreased 1O 2019 to 2020 2O increased from 2020 (4)	D L4
		[27]	
		TOTAL/TOTAAL: 150	

NOTES/NOTAS:		
QUESTION/VRAAG 1		
1.2.5	$R2\ 020 \times 12 \checkmark MA$ $= R24\ 240 \checkmark A$ $\approx R24\ 200 \checkmark R$	3/3 marks
1.3.1	90 000	1/2 marks
1.3.3	Descending order and July 2024 included./ <i>Dalende orde en Julie 2025 is ingesluit.</i>	2/3 marks
1.3.4	340 000	1/2 marks
QUESTION/VRAAG 2		
2.1.3	If the summer rates have been used and the rest is correct./Indien die somertariewe gebruik is en die res is korrek. Cost VAT excluded/<i>Koste BTW uitgesluit</i> $\checkmark MA$ $0-1\ 200\ 1\ 200\ kWh \times R3,04320 = R3\ 651,84$ $>1200\ 156\ kWh \times R3,04320 = R474,7392$ $= R3\ 651,84 + R474,7392$ $= R4\ 126,5792 \checkmark CA$  $\checkmark A$ $\times 115\%$ Cost VAT included/<i>Koste BTW ingesluit</i> $= R4\ 126,5792 \times \frac{115}{100} \checkmark MCA$ $= R4\ 745,57 \checkmark CA$ Total cost/<i>Totale koste</i> $= R4\ 745,57 + R356,93 \checkmark MCA$ $= R5\ 102,50 \checkmark CA$ OR/OF	7/8 marks 1MA both correct kWh 1A simplification for both values 1CA simplification 1MCA multiplying with $\frac{115}{100}$ 1CA simplification 1MCA adding the basic charge 1CA simplification

	Cost VAT excluded/<i>Koste BTW uitgesluit</i> ✓MA ✓A 0-1 200 1 200 kWh × R3,04320 = R3 651,84 >1200 156 kWh × R3,04320 = R474,7392 = R3 651,84 + R474,7392 = R4 126,5792 ✓CA Cost VAT included/<i>Koste BTW ingesluit</i> = R4 126,5792 × $\frac{15}{100}$ ✓MCA = R618,99 = R4 126,5792 + R618,99 = R4 745,57 ✓CA Total cost/<i>Totale koste</i> = R4 745,57 + R356,93 ✓MCA = R5 102,50 ✓CA OR/OF Cost VAT excluded/<i>Koste BTW uitgesluit</i> ✓MA ✓A 00-1 200 1 200 kWh × R3,04320 = R3 651,84 >1200 156 kWh × R3,04320 = R474,7392 = R3 651,84 + R474,7392 = R4 126,5792 ✓CA Cost VAT included/<i>Koste BTW ingesluit</i> = R4 126,5792 × 1,15 ✓MCA = R4 745,57 ✓CA Total cost/<i>Totale koste</i> = R4 745,57 + R356,93 ✓MCA = R5 102,50 ✓CA	1MA both correct kWh 1A simplification for both values 1CA simplification 1MCA multiplying with $\frac{15}{100}$ and adding to the VAT excluding 1CA simplification 1MCA adding the basic charge 1CA simplification
2.2.1	R22 560,72	1/2 marks
2.2.2	If only the total number of months are incorrect/ <i>Indien slegs die totale aantal maande korrek is</i>	5/6 marks
2.3.1	121 475 + 36% of taxable income above/ <i>van belasbare inkomste bo 512800</i>	1/2 marks
2.3.2	Tax bracket 3/ <i>Belastingkerf 3</i> (penalty of 1 mark/ <i>penaliseer met 1 punt</i>)	2/3 marks