GAUTENG PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

PREPARATORY EXAMINATION
2026

NAME OF SCHOOL:												
CANDIDATE'S NAME:												
DATE:	2	0	2	6	M	M	D	D	BOOK NUMBER		OF	BOOK(S)
TEACHER:									PAPER NUMBER	1		
SUBJECT NAME:	MATHEMATICAL LITERACY (10601)											

ANSWER ALL THE QUESTIONS IN THE QUESTION PAPER.

	MARKER				MODERATOR			
QUESTION	MARKS			MARKER'S INITIALS	MARKS			MODERATOR'S INITIALS
1	0				0			
2	0				0			
3	0				0			
4	0				0			
5	0				0			
				TOTAL				

TIME: 3 hours

MARKS: 150

27 pages

P.T.O.

INSTRUCTIONS AND INFORMATION

Read the following instructions carefully before answering the questions.

1. This question paper consists of FIVE questions. Answer ALL questions in the spaces provided.
2. Show ALL calculations clearly.
3. You may use an approved scientific calculator (non-programmable and non-graphical), unless stated otherwise.
4. Round-off ALL final answers appropriately according to the given context, unless stated otherwise.
5. Indicate units of measurement, where applicable.
6. Diagrams are NOT necessarily drawn to scale, unless stated otherwise.
   Show ALL calculations, diagrams, graphs, etc. that you have used in determining your answers.
7. No pages may be torn from this question paper.
8. Candidates may not retain a question paper or remove it from the examination room. Question papers must be returned to the invigilator at the end of the examination session.
9. Answers must be written in black/blue ink as distinctly as possible. Do NOT write in the margins.
10. Draw a neat line through any work/rough work that must NOT be marked.
11. In the event that you use the additional space provided:
    - 11.1 Write down the number of the question.
    - 11.2 Leave a line open and rule off after your answer.
12. Write neatly and legibly.

QUESTION 1

1.1 Tshepo is a Grade 12 learner preparing for his Mathematical Literacy June examination. During a group study session, he made several statements regarding the meanings of certain Mathematical Literacy terms.

Study the statements below that Tshepo made and state whether each statement is TRUE or FALSE.

1.1.1	At the break-even point, you are making neither a profit nor a loss.	(2)

1.1.2	Pay-as-you-earn (PAYE) is a tax deducted from your nett salary by your employer.	(2)

1.1.3	Zero-rated items are items that are VAT inclusive.	(2)

1.1.4	The probability of an event that is certain to happen, is 1.	(2)

1.2 Sara is a teacher at a school in Pretoria. She gave her class the petroleum product prices (in cents per litre) from 2021 to 2025, as part of an investigation. TABLE 1 below shows the petroleum product prices.

TABLE 1: PETROLEUM PRODUCT PRICES IN CENTS PER LITRE (c/l)

PETROLEUM PRODUCTS	2021	2022	2023	2024	2025
93 LRP (c/l)	1 469	1 936	2 110	2 217	2 134
93 ULP (c/l)	1 469	1 936	2 110	2 217	2 134
95 ULP (c/l)	1 486	1 961	2 140	2 249	2 159
Diesel 0,05% (c/l)	1 300,42	1 724,68	2 122,87	2 063,17	1 928,55
Diesel 0,005% (c/l)	1 301,82	1 728,08	2 141,27	2 072,57	1 942,95

[Adapted from *https://fuelsindustry.org.za>old-fuel-prices*]

Study the table above and use it to answer the questions that follow.

1.2.1	Determine the mode for the petroleum product prices in 2024.	(2)
1.2.2	Is the data represented by petroleum prices an example of numerical or categorical data?	(2)
1.2.3	Identify the petroleum product that had the highest price in 2025.	(2)
1.2.4	Determine the cost of diesel 0,05% (c/l) for the year 2022 in rands per litre.	(2)
1.2.5	Write the cost of 93 LRP (c/l) in 2024 out in words.	(2)

1.3 Sara obtained a bank statement from her bank to study the expenses that she incurred from April 2026 to May 2026. Sara's bank statement is provided in TABLE 2 below.

TABLE 2:
SARA'S BANK STATEMENT FOR THE PERIOD APRIL 2026 TO MAY 2026

DATE	DESCRIPTION	DEBIT	CREDIT	BALANCE
	Statement Opening Balance			457,72
30 Apr '26	Overdraft Service Fee	–69,00		388,72
30 Apr '26	Fixed Monthly Fee	–250,00		138,72
02 May '26	Robert Rent 62348048541 Real Time Transfer		12 000,00	12 138,72
02 May '26	Phakeme 14897124 SALARY		3 515,61	15 654,33
02 May '26	Sbsa Homel 533186811 250502 Std Bank Bond Repayment	–13 534,47		2 119,86
02 May '26	Ucount Membership Fee	–25 00		2 094,86
02 May '26	Psgkons Psgtp00013000058zgqf Debit Transfer	–1 969,44		125,42
05 May '26	Tops Gordon R 5326*7469 02 May Cheque Card Purchase	–200,00		-74,58
06 May '26	Ae Northcliff 5326*7469 02 May Cheque Card Purchase	–400,00		–474,58
07 May '26	Shell Florida 5326*7469 05 May Cheque Card Purchase	–145,12		–619,70
07 May '26	Ik *Melanie N 5326*7469 04 May Cheque Card Purchase	–300,00		–919,70
07 May '26	Vas00118523187 Electricity Purchase	–300,00		–1 219,70
08 May '26	Nintendo Ca13 5326*7469 06 May Cheque Card Purchase	–249,00		**A**

[Adapted from *Standard bank statement*]

Study the bank statement above and use it to answer the questions that follow.

1.3.1	Determine the number of transactions in the bank statement.	
		(2)

1.3.2	Determine the value of **A,** the closing balance on this bank statement.	(2)

1.3.3	Determine the total number of debit transactions.	(2)

1.3.4	Determine the number of days covered by this bank statement.	(2

1.3.5	Calculate the difference between the closing balance of 6 May 2026 and the closing balance of the bank statement on 7 May 2026.	(2)

[28]

QUESTION 2

2.1 Karabo received a loan of R80 000 from his uncle to join his sister, Neo, in her business. His uncle will charge him 13% simple interest per annum.

2.1.1	Calculate the interest that Karabo will have to pay his uncle if he repays the amount in 2 years.	(3)

2.1.2	Hence, calculate the total amount that Karabo should pay his uncle after 2 years.	(2)

2.2 Neo and Karabo are partners in a small business in Johannesburg. After a successful year, they made a profit of R15 000, which they decided to reinvest in a sustainable technology company based in Australia.

TABLE 3 below shows the exchange rates between the different currencies on 14 June 2026.

TABLE 3: EXCHANGE RATES ON 14 JUNE 2026

CURRENCY	EXCHANGE RATE
British Pound (£) to South African Rand (ZAR)	1£ = R22,53
Australian Dollar (AUD) to British Pound (£)	1AUD = 0,50£

Study the information and the table above to answer the questions that follow.

2.2.1	Identify the strongest currency between the British Pound and the Australian Dollar.	(2)

2.2.2	Neo and Karabo will share the profit from the investment in a ratio of 1 : 3. The invested profit will double at the end of the investment period. Calculate the final profit that Karabo will receive in Australian dollars.	
		(

2.2.3	Neo and Karabo's financial advisor uses a fixed portfolio of Australian companies. A summary of the companies' portfolio details is shown in TABLE 4 below. **TABLE 4: COMPANIES' PORTFOLIO DETAILS** If the R15 000 invested was randomly invested in one company in this portfolio, determine the probability, as a fraction, that it will NOT be in the health sector.	
		(2)

PORTFOLIO SECTOR DETAIL	COMPANIES
Technology	5
Agriculture	3
Health	7

2.3 Karabo owns a plumbing business. He pays his assistant R300 per geyser that is installed or repaired. He received an invoice in June 2026, shown in TABLE 5 below, for the material required to install or replace geysers.

TABLE 5: INVOICE FOR THE MATERIAL REQUIRED

PRODUCT DESCRIPTION	QUANTITY	PRICE EXCL. VAT	TOTAL EXCL. VAT
150 ℓ Geyser	1	4 173,04	4 173,04
Vacuum Relief Valve	2	101,00	202,00
Horizontal Poly Geyser Tray	1	161,00	161,00
Copper Tube	2	570,00	1 140,00
Copperman Copcal Elbow	2	11,00	22,00
Copperman Pipe 22 mm	4	**B**	88,00
Brassman Compression	1	36,57	36,57
Rate VAT	**Total**		**R5 822,61**
15,00%	**Vat Total**		
	Total (including VAT)		**C**

NOTE: THE INVOICE ABOVE WAS FOR ONE GEYSER.

Use the information and the invoice above to answer the questions that follow.

2.3.1	Calculate the value of **B**, the unit price of Copperman Pipe.	(2)

2.3.2	Calculate the total cost of the invoice, including VAT (value of **C**).	(2)

2.3.3	Karabo installed 20 geysers in March. He claimed that his total costs, including VAT, exceeded R140 000. Verify his claim. Show ALL your calculations.	

2.3.4	Karabo charges his clients the following rates: • His call-out fee is R1 250. • Thereafter, he charges R650 per hour or part thereof. • A geyser costs R4 600. • Installation is R2 500.		
	(a)	Explain the meaning of the concept *per hour or part thereof.*	
			(2)

	(b)	Determine a formula for the total income that Karabo will receive for installing a geyser.	
			(3)

	(c)	It takes Karabo 2 hours and 45 minutes to install a new geyser. Determine the total income that he will receive for installing 20 geysers.	
			(5)

2.3.5	The inflation rate changed from 2025 to 2026. Calculate the inflation rate on a 150 ℓ geyser, if the geyser was R 3 600 (exc. VAT) in 2025 compared to the cost of the 150 ℓ geyser on the invoice. Round-off your answer to the nearest whole number. You may use the following formula: **Percentage increase** $= \frac{New\ price - Old\ price}{Old\ price} \times 100\%$	
		(4)

[41]

QUESTION 3

3.1 John, a retailer, wanted to investigate the income generated during peak times over the course of one year. He compared his average income from January to October with his income for November and December. The income data collected from various retailers in 2025 is provided in TABLE 6 below.

TABLE 6: VARIOUS RETAIL SECTORS' INCOME DURING 2025 IN BILLIONS

RETAIL SUBSECTOR	JAN – OCT 2025	NOV 2025	DEC 2025
General dealers	R53,7	R64,2	R76,4
Food, beverages and tobacco	R9,6	R9,9	R14,5
Pharmaceutical, medical goods, cosmetics and toiletries	R9,1	R8,9	R9,9
Textiles, clothing, footwear and leather goods	R17,8	R23,4	R38
Household furniture, appliances and equipment	R4,2	R6	R6,4
Hardware, paint and glass	R8,9	R10,4	R9,9
All other retailers	R10,8	R13,2	R13,9
TOTAL INCOME	R114,1	R136	R169

[Adapted from *https://www.dailymaverick.co.za*]

Use the table and the information above to answer the questions that follow.

3.1.1	Write out the income for general dealers in December 2025 in number format.	(3)

3.1.2	Show that the range of income in November 2025 is R58,2 billion.	(2)

3.1.3	Determine the median income for the retailers from Jan – Oct 2025.	(2)

3.1.4	Hence, calculate the IQR for the retailers during Jan – Oct 2025. You may use the following formula: **IQR = $Q_3 - Q_1$**	
		(4)

3.1.5	Determine the average income for retailers of food, beverages and tobacco for 2025.	
		(3)

3.1.6	Determine the probability, as a decimal, that a subsector generates an income above R9 billion in Jan – Oct 2025.	
		(3)

3.1.7	Give ONE possible reason why sales increased in December 2025 compared to other months.	
		(2)

3.2 The Soccer World Cup takes place every 4 years. In June 2026, the teams competed for the FIFA World Cup. The teams had to qualify during the 2025 tournament. TABLE 7 below shows the teams' scores during the 2024/2025 FIFA World Ranking.

TABLE 7: THE TEAMS' SCORES DURING THE 2024/2025 WORLD RANKING

QUALIFYING TEAMS	TOTAL POINTS 2024	TOTAL POINTS 2025
Argentina	1 884	1 872
Brazil	1 784	1 759
Morocco	1 682	1 710
Spain	1 844	1 881
South Africa	1 416	1 423

[Adapted from *https://www.fifa.com/en/tournaments*]

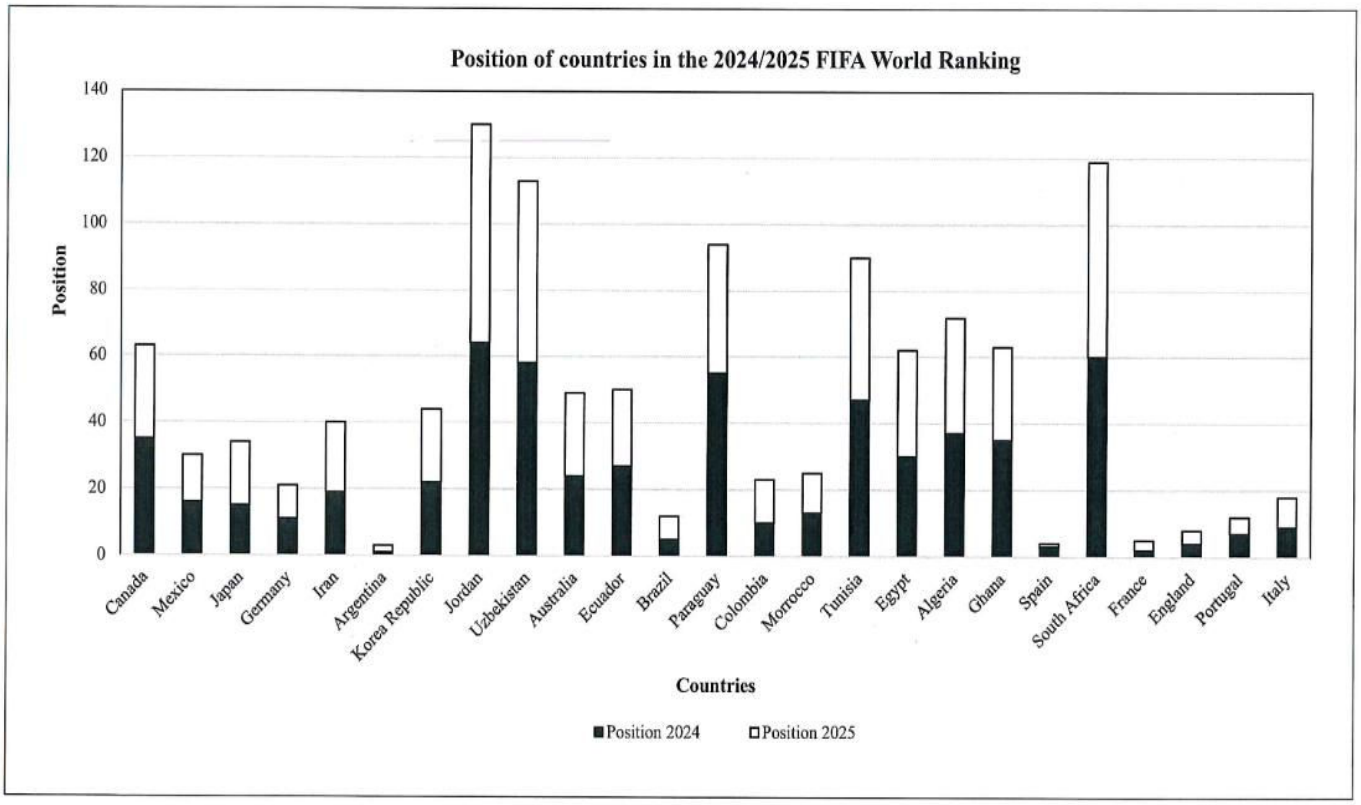
Use the information and the table above to answer the questions that follow.

3.2.1	Determine the difference between the number of points that Spain obtained compared to Argentina in 2025.	
		(2)

3.2.2	Write down the total points for Brazil to Morocco for 2024 as a ratio, in simplified form.	
		(3)

QUESTION 3.3

GRAPH 1: POSITION OF COUNTRIES IN THE 2024/2025 FIFA WORLD RANKING



3.3 The graph on page 16 represents the position of the popular countries in the 2024/2025 FIFA World Ranking.

Use the graph to answer the questions that follow.

3.3.1	Identify the type of graph used.	(2)

3.3.2	Determine the position that South Africa obtained in the 2025 FIFA World Ranking, according to the graph.	(2)

3.3.3	Use the graph to determine the bottom THREE countries in the 2024 FIFA-World Ranking.	(3)

[31]

QUESTION 4

4.1 Vuma is a 56-year-old teacher at a high school. He earns a monthly basic income of R32 400. He contributes 7,5% of his monthly basic income towards a pension fund. He contributes towards a medical aid for himself, his wife, and his daughter.

TABLE 8 below shows the individual tax table for 2025/2026.

TABLE 8: 2025/2026 TAX YEAR INDIVIDUALS' TAX TABLE

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

TAX REBATE	2025/2026
Primary	R17 235
Secondary (65 and older)	R9 444
Tertiary (75 and older)	R3 145

MEDICAL TAX CREDIT PER MONTH (R)	2025/2026
For the taxpayer	R364
For the first dependent	R364
For each additional dependent	R246

[Adapted from *https://www.sars.gov.za/*]

Refer to the 2025/2026 tax table and the information above to answer the questions that follow.

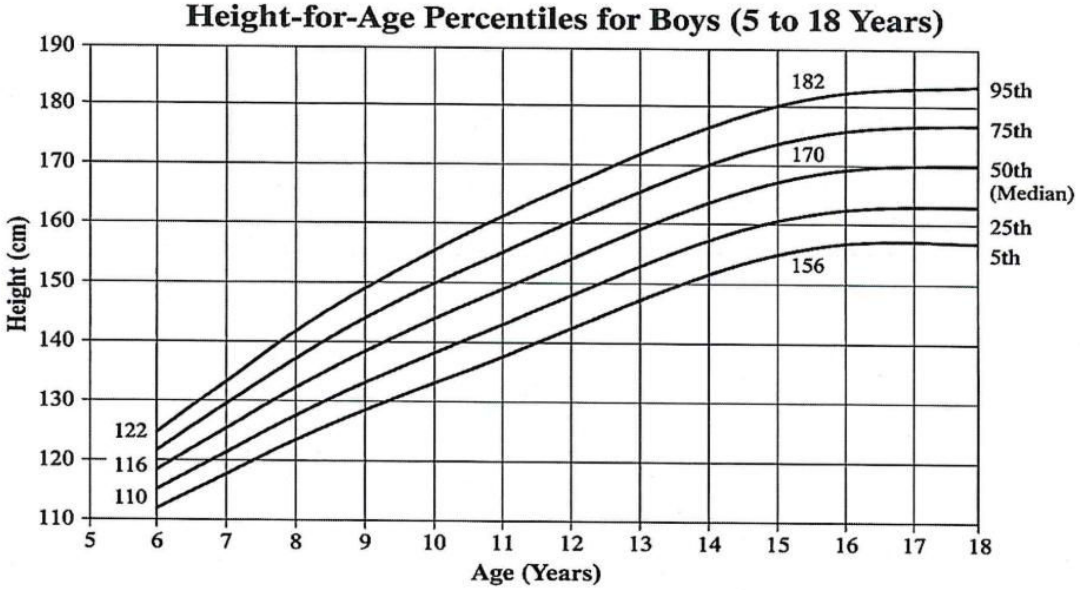
4.1.1	Calculate Vuma's annual medical aid tax credit for 2025/2026.	(3)

4.1.2	Show that Vuma's annual taxable income for 2025/2026 is R359 640.	(5)

4.1.3	Hence, identify Vuma's tax bracket for the 2025/2026 tax year.	(2)

4.1.4	Vuma claimed that his monthly contribution towards tax during the 2025/2026 tax year will be more than R3 800,00. Verify his claim using calculations.	
		(8)

4.2 A local sports academy monitors the growth of young boys enrolled in their soccer development programme using a height-for-age percentile chart as shown below to track their physical development.



Study the information above and use it to answer the questions that follow.

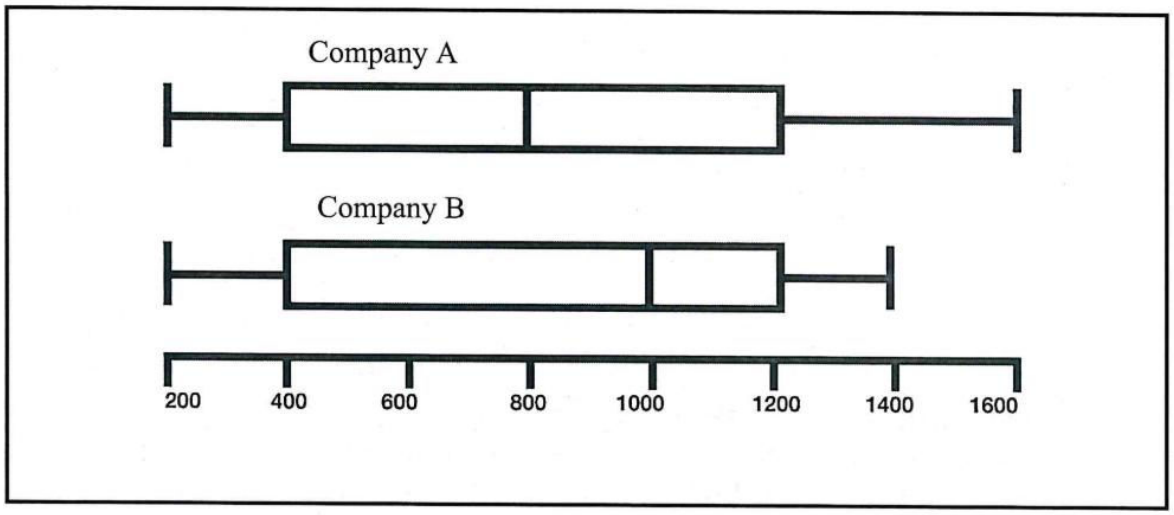
4.2.1	The academy's coaches want to determine the physical spread of heights among boys of different ages in the programme. Calculate the difference in height between a 15-year-old boy in the 75th percentile and a 15-year-old boy in the 25th percentile.	
		(4)

4.2.2	A 14-year-old boy in the academy has a height that places him on the 95th percentile. Explain what this position indicates about his height in relation to the other boys of the same age group.	
		(2)

[24]

QUESTION 5

5.1 Two companies pay their employees performance bonuses during the year. The diagram below represents the annual bonuses of the employees, grouped according to the mode of their performance.



Study the information and the diagram above to answer the questions that follow.

5.1.1	Identify the company that paid the **largest range of income**. Give a reason for your answer.	
		(3)

5.1.2	Company A has 300 employees. How many employees received a bonus **greater** than the **upper quartile**?	
		(3)

5.1.3	Determine which company paid better bonuses. Give ONE reason to justify your choice.	
		(4)

5.2 Mrs Bandelo visited her relative in Nelson Mandela Bay and enquired about their municipality tariff for electricity during June 2025. She was provided with information about the different rates for two areas.

The TABLES 10 and 11 below show the electricity rates for the areas.

TABLE 10: RURAL AREAS RATES IN NELSON MANDELA BAY

CONSUMPTION	COST EXCL. VAT PER kWh (R/kWh)
0 – 75 kWh	17,46
76 – 300 kWh	19,73
301 – 500 kWh	31,85
>500 kWh	36,61

TABLE 11: URBAN AREAS RATES IN NELSON MANDELA BAY

CONSUMPTION	COST EXCL. VAT PER kWh (R/kWh)
0 – 300 kWh	26,90
301 – 500 kWh	32,47
>500 kWh	39,27

[Adapted from *https://www.nelsonmandelabay.gov.za*]

Use the tables and the information above to answer the questions that follow.

5.2.1	Determine the Nelson Mandela Bay rural rate in rands, for 0 – 75 kWh consumption if the listed cost per kWh increased by 7,9% from June 2025 to June 2026.	
		(4)

5.2.2	Mrs Bandelo's relative lives in an urban area and uses an average of 245 kWh of electricity per month. Mrs Bandelo claims that her relative spent more than R1 000 including VAT, compared to people living in rural areas. Verify, using calculations, whether her statement is correct.	
		(9)

5.2.3	Mrs Bandelo's relative, who lives in an urban area, paid R1 345 (excluding VAT) for electricity usage in October 2025. Determine the number of kWh of electricity used by Mrs Bandelo's relative.	
		(3)

[26]

ADDITIONAL SPACE

ADDITIONAL SPACE

TOTAL: 150

END