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education

Department:
Education
North West Provincial Government
REPUBLIC OF SOUTH AFRICA

PROVINCIAL ASSESSMENT

GRADE 11

MATHEMATICAL LITERACY P1
NOVEMBER 2024

MARKS: 100

TIME: 2 hours

This question paper consists of 10 pages.

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INSTRUCTIONS AND INFORMATION

1. This question paper consists of FOUR questions. Answer ALL the questions.
2. Number the answers correctly according to the numbering system used in this question paper.
3. Start EACH question on a NEW page.
4. You may use an approved calculator (non-programmable and non-graphical), unless stated otherwise.
5. Show ALL calculations clearly.
6. Round off ALL final answers appropriately according to the given context, unless stated otherwise.
7. Indicate units of measurement, where applicable.
8. Diagrams are NOT necessarily drawn to scale, unless stated otherwise.
9. Write neatly and legibly.

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QUESTION 1

1.1

JANE'S SUPERMARKET

Welcome to our store!

A9 Daven Avenue, East London

Telephone number: 043 711 1234

BTW Registration No.: *** 951753

Coca Cola 2 ℓ	R24,95
Simba chips 125 g – salt & vinegar	R15,90
Yoghurt 6 pack – strawberry	R21,90
All Gold tomato sauce	R35,90
OMO washing powder 2 kg	R87,95
TOTAL	**R186,60**
CASH	R200,00
CHANGE	R13,40
# VAT 0%	R0,00
VAT 15%	R24,34
25/09/2024 16:10	Cashier: Belinda

Use the cash register slip above to answer the questions that follow.

1.1.1 How many items are purchased in total on the cash register slip? (2)

1.1.2 During which month is this purchase made according to the cash register slip? (2)

1.1.3 Define the term VAT. (2)

1.1.4 Show how the R24,34 VAT amount is calculated. (2)

1.1.5 Is this purchase paid with card or cash? (2)

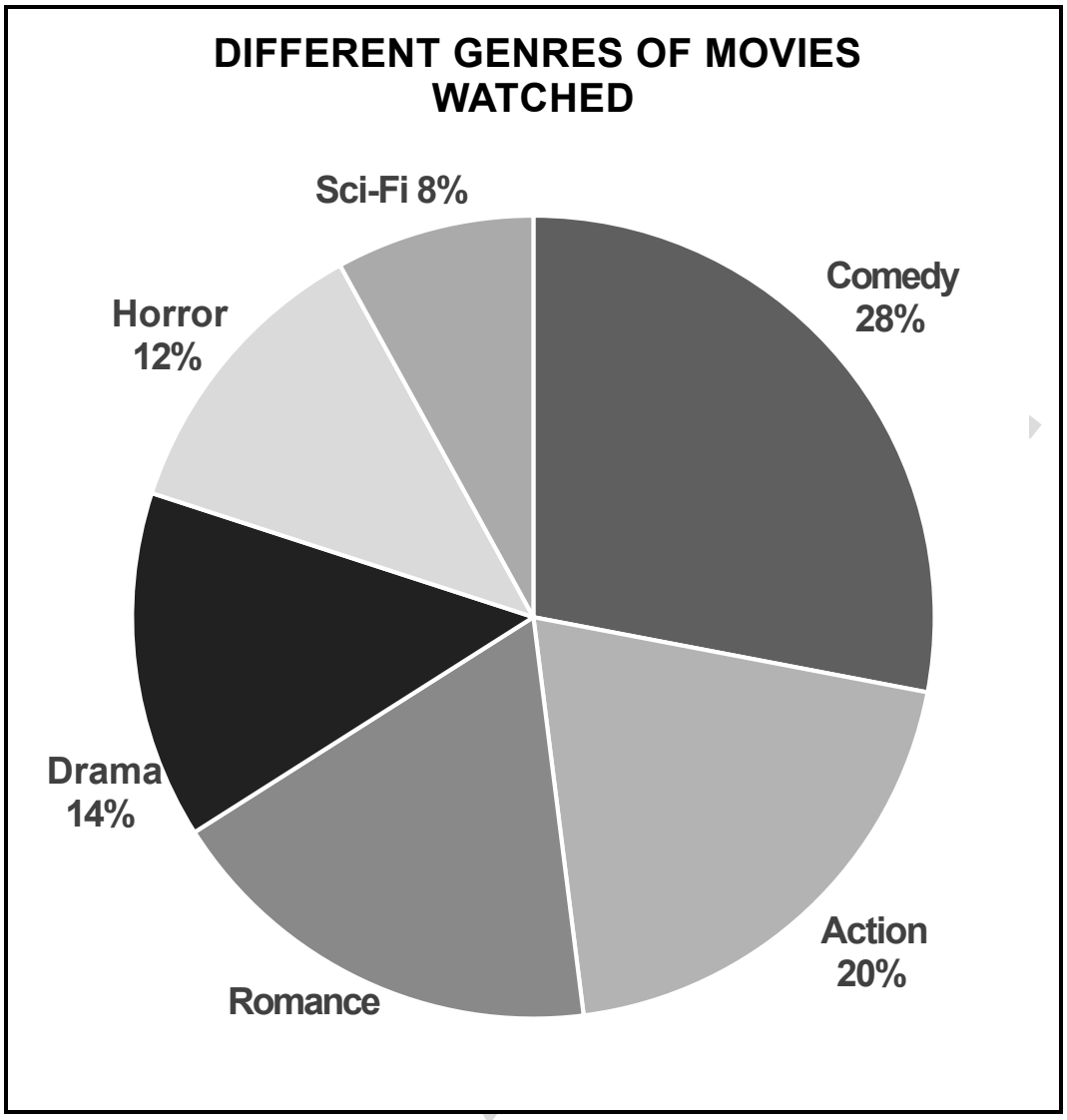
1.1.6 Write the total amount due in words. (2)

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1.2



Use the graph above to answer the questions that follow.

1.2.1 Name the type of graph used to represent the information above. (2)

1.2.2 What percent romance movies is watched? (2)

1.2.3 Which genre is the most watched according to the graph above? (2)

1.2.4 Determine the probability that a movie watched is a true-life story. (2)

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QUESTION 2

2.1 The Smith family would like to go on vacation in 2025. Mr. Smith examines their finances per month in 2024 and sets up the following monthly budget to determine how much they can save for their vacation the following year.

TABLE 1: MONTHLY BUDGET FOR THE SMITH FAMILY

INCOME		**EXPENSES**	
Mr. Smith salary (Manager)	R25 000	Home loan	R8 400
Mrs. Smith salary (Teacher)	R17 000	Car instalments	R8 200
Rent income	R5 000	Insurance	R2 100
		Groceries (R1 150 per week)	
		Fuel	R4 500
		Entertainment	R2 000
		School fees and activities	R4 850
		Medical expenses	R1 850
TOTAL INCOME	**R47 000**	**TOTAL EXPENSES**	

Use the information above to answer the questions that follow.

2.1.1 Calculate how many litres of fuel the Smith family uses per month if the price of fuel is R23,25 per litre. (2)

2.1.2 Calculate the total groceries for the month. (2)

2.1.3 Calculate how much money the Smith family has left at the end of the month to save for their vacation. (4)

2.1.4 If the rent income they received per month in 2023 was R4 465, calculate, to the nearest whole number, the percentage increase from 2023 to 2024.

You may use the following formula:

$$\% \text{ increase} = \frac{\textit{rent income } 2024 - \textit{rent income } 2023}{\textit{rent income } 2023} \times 100\%$$

(3)

2.1.5 Name ONE other type of income that a household can earn. (2)

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2.2 The Smith family is considering the following travel package to the Kruger National Park and it includes the following:



- Scheduled return flights from Johannesburg to the Kruger
- All road transfers between airport and activities
- 2 nights' accommodation at Sudwala Lodge
- 4 nights' accommodation at Sabie River Bush Lodge
- All breakfast and dinners included
- Elephant interaction where you and the little ones can feed, greet and walk hand-in trunk with the gentle giants
- Early morning and late afternoon off-road game drives that take place in an open 4×4 safari vehicle with a ranger and tracker team
- Child friendly facilities and kids activities
- Park and conservation fees

The cost for this package is from R24 999 per person sharing and is only available during low season.

Use the information above to answer the questions that follow.

2.2.1 Write the cost of the package in words. (2)

2.2.2 Write in simplified form, the ratio of nights' accommodation at Sudwala Lodge to the nights' accommodation at Sabie River Bush Lodge. (2)

2.2.3 Name ONE other expense that may be incurred during their holiday that is not included in the package. (2)

2.2.4 Mr. Smith deposits R5 500 every month for the next 12 months in a savings account for their holiday. Every month he earns 7% interest on the amount he deposits. Calculate how much money he will have in total in his savings account after a year. (5)

2.2.5 Mrs. Smith invests R30 000 in a savings account and earns 9,2% interest per year, compounded bi-annually.

She claims that if she adds her money from her savings account together with her husband's money from his savings account after one year, they will have enough for 4 people to go on vacation to the Kruger National Park according to the travel package above.

Verify, by showing ALL calculations, whether her claim is CORRECT. (7)

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QUESTION 3

3.1 Athletics consists of different events. One of these events is the 100 metre. The table below shows the ten fastest times ever for men of South Africa in the 100 metre event.

TABLE 2: 10 FASTEST TIMES OF THE MEN'S 100 METER EVENT IN SOUTH AFRICA

	NAME AND SURNAME	Time (sec)	Date of birth	Place of birth
1	Akani Simbine	09,82	21 September 1993	Kempton Park
2	Benjamin Richardson	09,86	19 December 2003	Pretoria
3	Shaun Maswanganyi	09,87	01 February 2001	Soweto
4	Henricho Bruintjies	09,89	16 July 1993	Paarl
5	Retshidisitswe Mlenga	09,93	27 February 2000	Bloemfontein
6	Wayde van Niekerk	09,94	15 July 1992	Kraaifontein
6	Gift Leotlela	09,94	12 May 1998	Phuthaditjhaba
8	Thando Roto	**A**	26 September 1995	King Williams Town
9	Simon Magakwe	09,98	14 May 1986	Itsoseng
10	Emile Erasmus	10,01	03 April 1992	Pretoria

[Adapted from https://worldathletics.org/record]

Use the information above to answer the questions that follow.

3.1.1 Which athlete's times is the 4th fastest time ever from South Africa? (2)

3.1.2 Arrange the date of birth of the 10 athletes from the oldest to the youngest. (2)

3.1.3 Determine the modal place of birth of the athletes. (2)

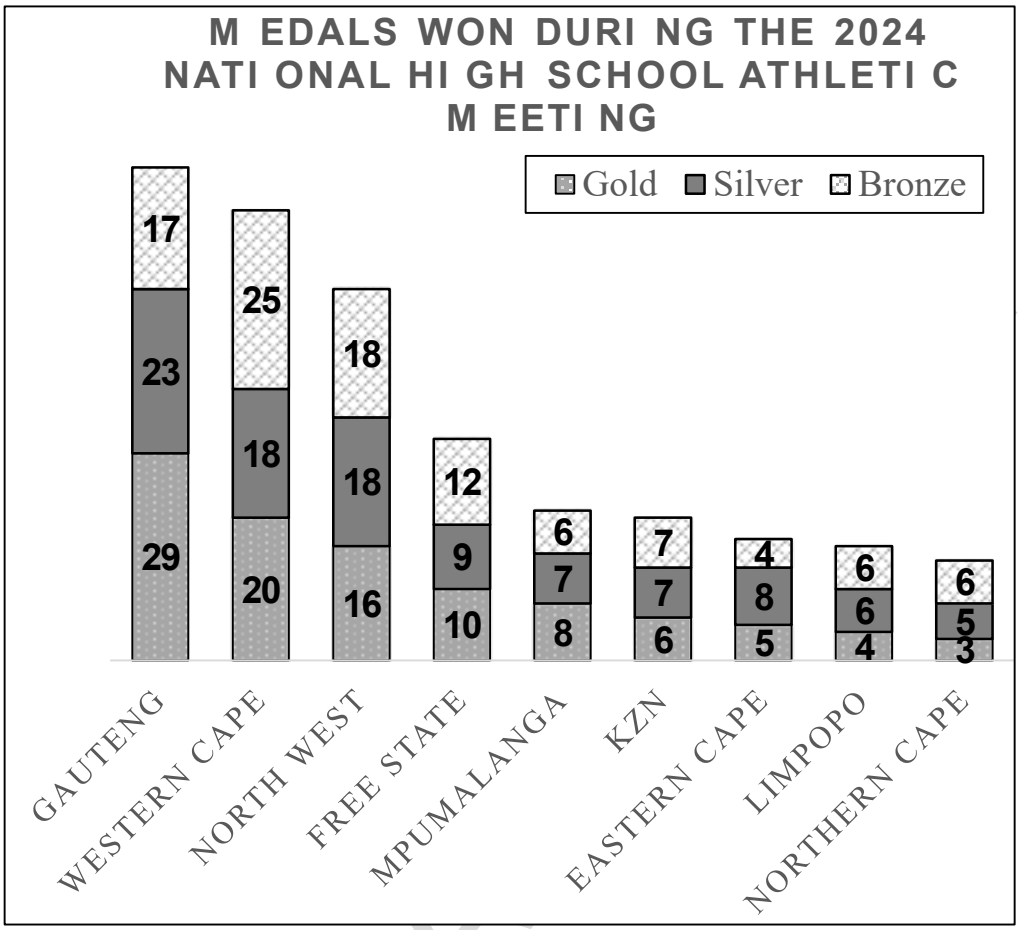
3.1.4 Calculate **A**, the time of Thando Roto, if the average time is 09,919 seconds for the top 10 men in the 100 metre event. (4)

3.1.5 Calculate the range of the 100 metre times. (3)

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3.2 The graph below shows the nine provinces' medals won during the national high school athletics meeting held in 2024.



Use the information above to answer the questions that follow.

3.2.1 How many medals did Gauteng won in total? (2)

3.2.2 Determine the difference between North West and Free State's silver medals. (3)

3.2.3 What percentage of Western Cape's total number of medals won was bronze during the 2024 national meeting? (3)

3.2.4 Determine the probability of how many of the 9 provinces received more than 20 gold medals. Give your finale answer as a decimal number, rounded to TWO decimal places. (3)

3.2.5 In 2023, during the national high school athletics meeting, Limpopo province only won 8 medals in total. It is claimed that their percentage growth from their total medals has increases by more than 50%.

Verify, by showing ALL calculations, if the claim is VALID. (4)
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QUESTION 4

4.1 Mrs. Molefe investigates his bank charges for a certain month. She looks at what transactions she has made during the month to determine how much each transaction's bank charges should be. The table below shows certain transaction costs of his bank.

TABLE 3: TRANSACTION COSTS

TRANSACTIONS	TRANSACTION COSTS
Cash withdrawal from own bank's ATM	1,15% of the amount withdrawn
Cash withdrawal from another bank's ATM	R9,50 + own bank's transaction costs
Deposit at own bank's ATM	2,25% of amount deposited
Debit order/Stop order	R6,00 per transaction

Use the information above to answer the questions that follow.

4.1.1 Mrs. Molefe's opening balance for the month is R42 952,19. On the first of the month, the following debit orders were deducted from her account:

- Insurance – R2 100,00
- Home loan instalment – R8 800,00

Calculate her balance at the end of the first day of the month. (3)

4.1.2 On the 2nd of the month, an amount of R1 150 was withdrawn from her own bank's ATM. Calculate Mrs. Molefe's balance at the end of the 2nd of the month. (4)

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4.2 Mrs. Molefe wants to buy a new motorcar. She uses the loan factor table below to determine the interest rate against the loan period.

TABLE 4: LOAN FACTOR TABLE

LOAN PERIOD	INTEREST RATE						
	10%	10,25 %	10,50 %	10,75 %	11%	11,50 %	12,00 %
3 years	32,27	32,38	32,50	32,62	32,74	32,98	33,21
4 years	25,36	25,48	25,60	25,72	25,84	26,09	26,33
5 years	21,25	21,37	21,49	21,62	21,74	21,99	22,24
6 years	18,53	18,65	18,78	18,91	19,03	19,29	19,55



Selling price	R198 000
Deposit	R29 700
Interest rate	10,50%
Terms	48 months

Use the information above to answer the questions that follow.

4.2.1 Determine the probability that the loan factor will be more than 19,00% for the loan period of 6 years. Give your finale answer as a percentage, rounded to the nearest whole number. (3)

4.2.2 Calculate the loan amount that Mrs. Molefe has to borrow for the motorcar once the deposit is taking into account. (2)

4.2.3 Use the loan amount (QUESTION 4.2.2) and the table of loan factors above to calculate her total monthly payment, plus R65,00 administration fee.

You may use the following formula:

$$\textbf{Monthly payment} = \frac{\textit{loan amount}}{1\,000} \times \textbf{loan factor}$$ (3)

4.2.4 Mrs. Molefe makes a statement that she will pay more than R40 000 of interest if she buys the motorcar with the 48-month option.

Verify, by showing ALL calculations, whether her statement is CORRECT. (6)

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GRAND TOTAL: 100

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