Bergvliet High School

GRADE 10

Mathematical Literacy Paper 1

MARKS: 75 **TIME: $1\frac{1}{2}$ HOURS**

EXAMINER: BL Siljeur
MODERATOR: K Gwavava

NAME: ……

TEACHER: Fr / Si / Gw

QUESTION	MARK	LEARNERS MARK
Q 1	**18**	
Q 2	**20**	
Q 3	**17**	
Q 4	**10**	
Q 5	**10**	
Total	**75**	

INSTRUCTIONS AND INFORMATION

1. Show ALL calculations clearly.
2. Round off ALL final answers to **two decimal places**, unless stated otherwise.
3. Indicate units of measurement where applicable
4. Write neatly and legibly.

QUESTION 1

1.1.1 Bergvliet High School has 1280 learners and 40 teachers. Write the ratio of learners to teachers in a simplified form. (3)

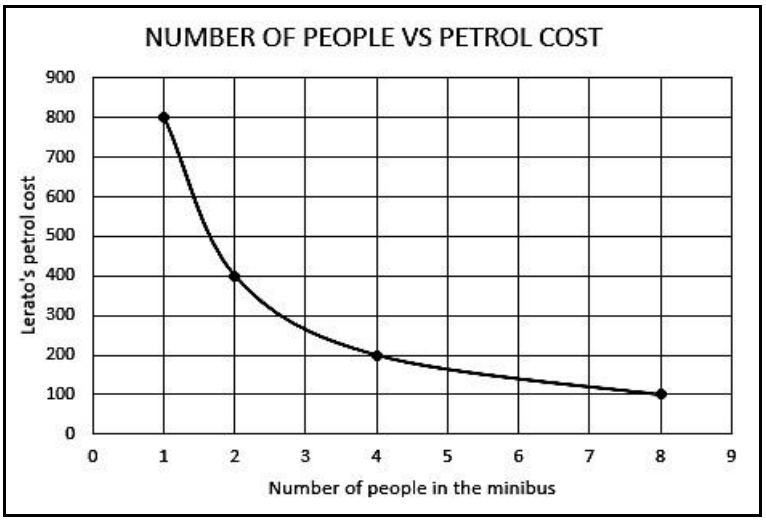
1.1.2 In 2016, Statistics South Africa reported that there were 17 003 467 Secondary School students in the country. Write down the number of students in words. (2)

1.1.3 Mary has R1 450. She gave $\frac{3}{5}$ of her money to her son. Calculate (in Rands) the amount of money she gave to her son. (3)

1.1.4 Mary needs 45 tiles to tile her kitchen. If each box has 12 tiles, how many boxes should she buy? (3)

1.2 Mandy is planning to go on holiday in a minibus. She estimates that petrol will cost her R800 to get to her destination.

The graph below outlines the relationship between the amount of money that Mandy will have to pay for petrol, and the number of people travelling in the minibus.



Use the graph above to answer the questions.

1.2.1 Determine how much it will cost Mandy if 4 people travel with her in the minibus. (2)

1.2.2 Determine the number of people travelling with her in the minibus, if Mandy uses R400 for her petrol. (2)

1.2.3 Calculate how much the petrol cost will be if 10 people travel in the minibus. (3)

[18]

QUESTION 2

2.1 Study **TABLE 1** below regarding bank fees at Mega Bank and answer the questions that follow.

TABLE 1: BANK FEES FOR MEGA BANK ACCOUNT

Mega Bank Account Fees	
Monthly Account Fee	R65,00
Cellphone banking	R0,00
Cash Withdrawals (Mega Bank ATM) First R1 500 More than R1 500	 R0,00 R12,00 + R1,20 per R100 (or part thereof)
Cash Withdrawals (Other bank ATM)	R15,00

2.1.1 What is the monthly fee of having this account? (2)

2.1.2 Ababalwe withdraws R1 700 at a Mega Bank ATM.
Calculate what this withdrawal will cost her. (3)

2.1.3 Ababalwe had to transfer R500 to her mother's account. She decided to use her cellphone banking to do this. How much did this transaction cost her? (2)

2.2 While at the mall, Ababalwe had lunch at a restaurant. Her bill, excluding VAT, was R90,80.
Calculate the amount of VAT that will be charged, if VAT is calculated at 15%. (3)

2.3 **TABLE 2** below shows a rough statement of Bane's income and expenditure items for a month. Study the table and answer the questions that follow.

TABLE 2: INCOME AND EXPENDITURE FOR BANE

INCOME	AMOUNT	EXPENDITURE	AMOUNT
Salary	R11 750	Groceries	R2 100
		Rent	---------
		Petrol	R1 000
		Car payment	R1 800
		Electricity	---------
		Clothing	R450
		Insurance	R320
		Entertainment	R600

2.3.1 Name ONE variable and ONE fixed expenditure item. (2)

2.3.2 Bane spends a total of R3 700 on electricity and rent combined. If the ratio of electricity to rent is 1: 4, determine the amount she pays for electricity. (4)

2.3.3 Calculate what percentage Bane's groceries is of her salary.
Round your answer off to the nearest percentage. (4)

[20]

QUESTION 3

3.1 The body mass (in kg) for each member of the under 17 rugby team from Fundakahle High School is recorded in the table below.

Refer to the information and answer the questions that follow.

47	**55**	**53**	**58**	**51**	**60**	**58**	**46**
55	**44**	**55**	**50**	**62**	**49**	**52**	**64**

3.1.1 Write down the mode for the U-17 rugby team. (2)

3.1.2 Calculate the mean. (3)

3.1.3 Calculate the median for the U-17 rugby team. (3)

3.1.4 Determine the range of body mass for U-17 rugby team. (2)

3.2 A survey was done at Fundakahle High School to determine the number of boys and girls who actually enjoy reading. The results are provided in **TABLE 3** below. Study the table and answer the questions that follow.

TABLE 3: SURVEY RESULTS

	Enjoy reading	**Do not enjoy reading**	**TOTAL**
Boys	**A**	212	327
Girls	372	101	473
TOTAL	487	**B**	800

Determine the missing values **A** and **B** in the table above. (4)

3.3 Determine the probability of a girl being selected by means of random selection. Write your final answer as a percentage of random selection. (3)

[17]

QUESTION 4

Michael sold some of his lovebirds to buy other birds. He sold the birds for R25 each. The table below shows the amount of money he made from his sales.

Number of birds	0	1	2	5	10	20
Money received from sales	R0	R25	R50	**4.4**	R250	R500

4.1 Name the independent variable of the data given. (2)

4.2 Are the number of birds discrete or continuous data? (2)

4.3 Use the table above to draw a line graph on the **ANSWER SHEET** to show how much money Michael made from his bird sales. Clearly label the axes and give the graph a suitable heading. (4)

4.4 Calculate how much money Michael will get if he sells only 5 birds. (2)

[10]

QUESTION 5

Lebogang is staying in EThekwini Municipality. Table 2 below shows the consumption of electricity and the cost of different appliance used by Lebogang during November 2015

TABLE 2:COST OF ELECTRIC APPLIANCE

Appliance	**Electrical rating in Watts**	**Hours used per day**	**Days used per month**	**kWh Used per month**	**Monthly Cost at 131,46 Cents/kWh (excl VAT at 15%)**
Cellphone Charger	28	10	14	1,96	R2,58
Clothes iron	1 500	4	6	36	R47,33
Kettle	2 000	0,5	30	30	R39,44
Light	100	5	30	15	R19,72
Refrigerator (With freezer)	400	6,5	30	78	R102,54
Hotplate: 2 plate	1 500	3	30	**A**	R177,48
Television	80	6	30	14,4	R18,93
TOTAL				**310,36**	**R 408,02**

[Adapted from www.durban.gov.za]

5.1 Name an electric appliance that was used on daily basis with higher electrical rating? (2)

5.2 How many kilowatts hour (kWh) were used for the refrigerator? (2)

5.3 Calculate the missing value of **A.** (4)

5.4 Calculate the total monthly cost excluding VAT. (2)

[10]

Total = 75 marks

Question 4.3 Answer Sheet

