



HILLCREST HIGH SCHOOL
Mathematical Literacy
Examination
Gr 11 Paper 1
JUNE 2022

Examiner: Mrs. Leuschke

Moderator: Ms. Stow

MARKS: 75

TIME: 1½ hours

<u>NAME :</u>				
<u>TEACHER:</u>				
<u>Q1</u>	<u>Q2</u>	<u>Q3</u>	<u>Q4</u>	<u>TOTAL</u>

INSTRUCTIONS AND INFORMATION:

Read the following instructions carefully before answering the questions.

1. This question paper consists of 4 questions and 9 pages.
2. Clearly show ALL calculations, diagrams, graphs, etc which you have used to determine your answers.
3. Answers only will NOT necessarily be awarded full marks.
4. An approved scientific calculator (non-programmable) may be used, unless otherwise stated.
5. If necessary, answers should be rounded off to TWO decimal places, unless otherwise stated, or appropriately within the given context.
6. Number the answers EXACTLY as the questions are numbered.
7. Diagrams are not necessarily drawn to scale.
8. It is in your own interest to write legibly and to present your work neatly.

Question 1

Sandy bakes rusks and sells them in 500g packs at R55 per pack. The table below shows the main ingredients of the rusks. (A rusk is a hard, dry biscuit or twice- baked bread)

Main Ingredients to bake 3000g of rusks

Self-raising flour	1250g
Bran flour	5 cups
Raisins or dates	100g
Butter	500g

1.1 Convert 1250 grams to kilograms.

(2)

1.2 Determine the profit if it cost Thandi R47,50 to make one pack of rusks.

(2)

1.3 Write the simplified ratio of butter to self-raising flour.

(2)

1.4 Determine the number of cups of bran flour needed to make 12 000g of rusks.

(2)

1.5 The temperature needed to bake rusks is 120°C. Convert the baking temperature to °F. (Round your answer off to the nearest 10°.)

You may use the formula :

(3)

$$^{\circ}\text{F} = \frac{9}{5} \times (^{\circ}\text{C}) + 32$$

[11]

Question 2

Thembi is a florist who runs her business from a small rented room from Monday to Saturdays. She keeps a careful record of her expenses.

Week	1	2	3	4
Assistants wages	R320,00	R320,00	R320,00	R320,00
Rental	R1 500,00	R1 500,00	R1 500,00	R1 500,00
Electricity and water	R56,80	R66,30	R66,30	R75,80
Flowers	R2 370,00	R2 456,00	A	R4 250,00
Miscellaneous materials	R46,80	R56,60	R61,80	R87,10
Telephone	R165,80	R256,10	R356,20	R521,80
Municipal services	R44,80	B	R66,80	R73,50
Total expenses	C	R4 710,40	R5 486,00	R6828,20

2.1 Calculate the missing values **A**, **B** and **C**.

(6)

2.2 Name one fixed expense that Thembi pays. (2)

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2.3 Calculate the average expense per working day on telephone calls for the 4 weeks (4)

2.4 Calculate the difference between **Week 4** total expense and **Week 2**. (2)

2.5 What percentage of the total expense for week 4 is the telephone expense? (correct to 2 decimal places) (3)

2.6 Thembi says that her income for Week 3 was R10 046. Verify, showing all calculations whether or not she is correct. Her profit for week 3 was R4 560. (4)

2.7 Calculate the profit margin to the nearest percentage for Week 3. Use the formula:

$$\text{Profit margin} = \frac{\text{income} - \text{expenses}}{\text{expenses}} \times 100\% \quad (4)$$

[25]

Question 3

Bradley went to the bank to request a printout of his bank statement, detailing his transactions from 25/01/2022 to the 25/02/2022. Study the statement and answer the questions that follow.

ABC BANK				
DATE	DESCRIPTION	AMOUNT	AMOUNT	BALANCE
25/01/2022	Salary	24 000,00		24 151,50
27/01/2022	Car Insurance		-300,00	23 851,50
01/02/2022	Electronic transfer – BOND		-9000,00	14 851,50
01/02/2022	Debit order Healthsaver medical aid		-1500,00	13 351,50
02/02/2022	Debit order Mobi contract		-750,00	12 601,50
03/02/2022	Debit order Supa Fashion Store		-900,00	11 701,50
05/02/2022	Purchase at Shop ‘n Go		-6000,00	5 701,50
14/02/2022	Payment Mr. S Smith	500,00		6 201,50
20/02/2022	Automechanix		-3000,00	3 201,50
			TOTAL REMAINING	3 201,50

3.1 How can you tell the difference between the debits and the credits in this statement? (2)

3.2 List three of Bradley's debits for the month.

(3)

3.3 Bradley stated that he had R251,50 left in his bank account before his salary was paid in. Verify, showing all calculations, whether or not this is correct.

(4)

3.4 Bradley receives some money for his birthday during the month shown on the statement. On which date did this transaction take place?

(2)

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3.5 Bradley said that he would have had less than R2 500 left in his account if he had not received the money for his birthday. Verify, showing all calculations, whether or not he is correct.

(3)

3.6 Bradley wants to save R600 this month. He says that he will have to save 15% of the money that he has left in his account. Verify, showing all calculations, whether or not he is correct. (4)

[18]

Question 4

Municipalities charge rates for each property, for example, a house, a flat or a piece of land. Rates are based on the property’s value. Below is some information on how municipal rates are calculated.

There are several charges on a municipal account that vary according to the type of property you own and how much water you consume. The details are as follows.

Single-residential properties

Property rates are based on the total value of the property (building and land). The rate is 0,989c for every rand of the property value (per year).

Refuse collection charge is R38,60 for a wheelie bin (monthly charge).

Water consumption is charge on a stepped tariff. The more water you use, the more expensive it becomes. The table below shows the monthly charges:

Water consumption (kl)	Charge per kilolitre (R)
0–6	free
7–20	2,73
21–40	4,30
41–60	5,46

- The first 6 kl of water are free.
- The next 14 kl cost R2,73 for each kilolitre.
- The next 20 kl cost R4,30 for each kilolitre.
- The next 40 kl cost R5,46 for each kilolitre.

4.1 What will the annual Property rates be for one year for a property that is worth R250 000? Give your answer in Rands. (3)

4.2 How many litres of water will a household actually pay for if 25 kilolitres were used in the month? (2)

4.3 Calculate the cost, including VAT, of using 9,5kl in one month. (5)

4.4 Calculate the total amount payable for one month for property rates and water by a household that uses 9,5kl of water in one month and the value of their property where they live is R250 000. (4)

4.5 Study the payslip below and answer the questions that follow.

Star Enterprises 36 Going Road Gauteng 8155	Employee code : 3002 Emp. Name: Mr Spock Job title : Human Resources Manager	Period end date: 2022/05/31 Date started: 2012/01/01 ID number: 5411135057086	
Hour/days	Earnings	Deductions	
30 days	Daily Rate	1 611,67	
		Tax	13 236
		UIF	483,50
		Pension	855
	Total	48 350	
		Total	14 574,50
		Net Pay	B

4.5.1 Give the birth date of Mr Spock.

(2)

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4.5.2 Calculate Mr Spock's total earning for a month if he got an increase of 7,2% and worked for 28 days.

(5)

[21]