



Hoërskool Johan Jurgens
Mathematical Literacy
Grade 10
November Exam
Paper 1

Examiner: Ms. N. Gertenbach
Moderator: Mrs. M. Botha

Time: 1 Hour 30 Minutes
Total: 75 marks

Name and Surname: _____

Grade: 10 Key _____

Date: _____

Finance	Finance	Measurements	Maps	
Question 1	Question 2	Question 3	Question 4	Total
____ / 15	____ / 26	____ / 20	____ / 14	____ / 75

Instructions:

1. Please write your name, surname, grade and date in the space provided on the question paper.
2. Please write your name, surname, grade and date on the folio paper.
3. This paper consists of **4 QUESTIONS**.
4. Read all questions carefully and think before your answer.
5. Write down all your calculations, where applicable.
6. Non-programmable calculator may be used.
7. Round off two decimal places, unless stated otherwise.
8. Write with a blue pen and cross out with a pencil if you made a mistake.
9. Please write neatly and legibly. (If I can't read it, I can't mark it!)
10. Take a deep breath, you got this.
11. Good luck!!!!

This paper consists out of 8 pages.

QUESTION 1

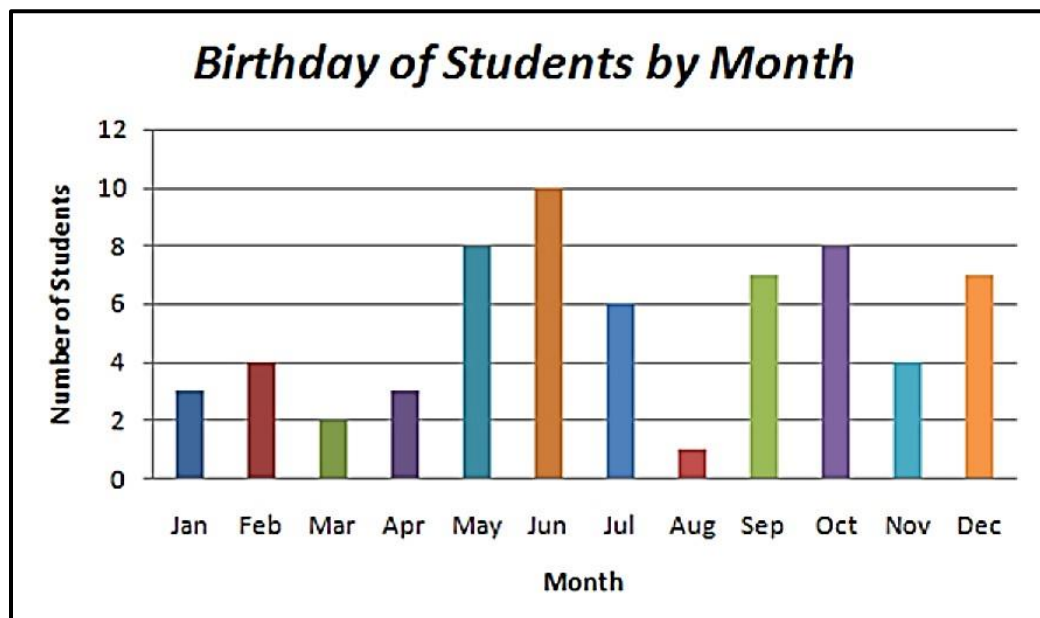
- 1.1 Mrs. N Africa is a Grade 10 teacher. She decided to have one big party to celebrate all the learners in her register class's birthdays. Given below is the till slip she received after doing some of the shopping for the party. Study the till slip and answer the questions that follow.

Pick n Play	
Cashier: Olwethu	
HAMBURGER BUNS (6 each)	
8 @ 10.99	(1.2)
FRUIT JELLYBEANS	
5 @ 25.00	125.00
MAYNARDS WINE GUM ROLL	
20 @ 7.99	159.80
TOMATOES 1KG	17.99 #
SIMBA CHIPS	
10 @ 15.00	150.00
CRISP LETTUCE	
4 @ 12.99	51.96 #
LARGE CARRIER BAG	
3 @ 0.50	1.50
DAIRY MILK OREO SLAB 120 g	
10 @ 25.99	259.90
COKE LIGHT 2L	
10 @ 16.49	164.90
DUE VAT INCL	1 018.97
----- TENDER -----	
MASTERCARD	1 018.97
6423222	
TOTAL ITEMS:	71
----- TAX INVOICE -----	
TAXABLE VAL	VAT VAL
VAT INCL	1 018.97 142.35
# ZERO-RATED	69.95
-----VAT REG NO. 4090105588-----	

*16364 3305 103923 7	24.02.2020 18:54

- 1.1.1 What is the meaning of the hashtag symbol (#) that is found next to certain prices? (2)
- 1.1.2 Calculate the total number of hamburger buns. (2)
- 1.1.3 Write the cost of one bag of jellybeans as a ratio to the cost of one bag of chips. Give your answer as a simplified ratio. (2)
- 1.1.4 Show how the VAT amount of R142.35 has been calculated. (3)

1.2 Mrs. N Africa decided to display the birthdays of every child that she teaches in a graph. Study the graph given below and answer the questions that follow.



- 1.2.1 Name the type of graph that Mrs Africa used. (2)
- 1.2.2 How many learners do Mrs Africa teach in total? (2)
- 1.2.3 Write down the month(s) in which the second-most birthdays are celebrated. (2)

(2)

[15]

QUESTION 2

2.1 Mr and Mrs West decide that they are spending too much money. They looked at their expenditures for the month of May, including items that are quoted for a year, but must be paid monthly. Given below in the table is their findings.

Bond repayment on house	R5 000 per month
Water and electricity	R1 000 per month
School fees for 2 children	R1 200 per annum (each)
Clothing accounts	R 560 per month
Insurance	R1 000 per month
Retirement policy	R 100 per month
Church contributions	R 500 per month
Bank charges	R 160 per month
Entertainment and eating out	R1 000 per month
Gym membership	R 279 per month
Petrol	R3 500 per month
Food	R3 000 per month
Cell phones	R1 200 per month
DSTV	R5 200 per annum

- 2.1.1 Calculate the monthly payment on the items that are quoted per year. (3)
- 2.1.2 How much did the Wests spend in May? (2)
- 2.1.3 Mr and Mrs West together earn R17 000 per month. How much did they overspend in May? (2)
- 2.1.4 Mr West is a very good watch salesman. For every two watches that his colleague David sold, Mr West sold five watches. If their total watch sales were 840, calculate the number of watches sold by Mr West. (3)

- 2.2 Given below are the coastal and inland petrol prices in South Africa for June 2024. Study the table and answer the questions that follow.

June 2024 petrol and diesel prices for inland and coastal areas		
	Inland	Coastal
Petrol	R18,48/ℓ	R17,72/ℓ
Diesel	R16,28/ℓ	R15,68/ℓ

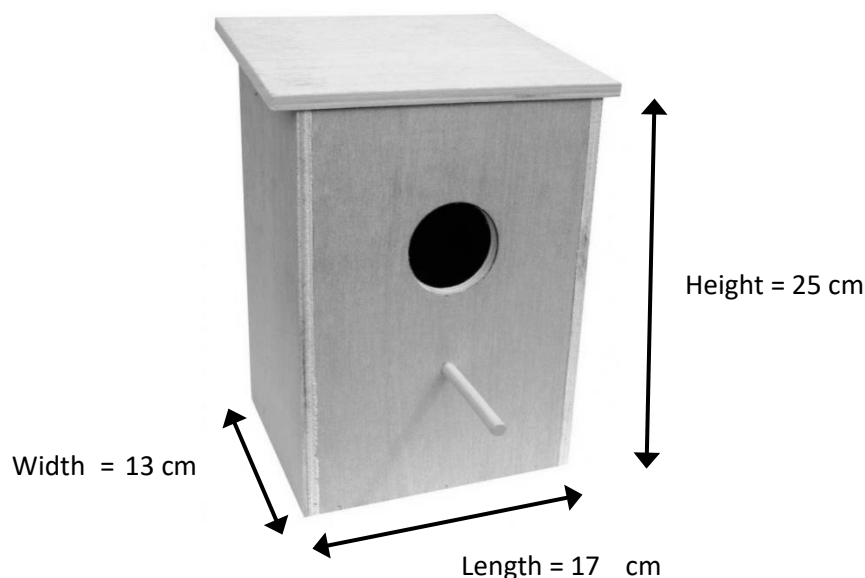
- 2.2.1 If the Wests live in East London, how much would they pay per litre for diesel? (2)
- 2.2.2 If they spent R4 000 on diesel, determine how many litres of diesel they used this month. (2)
- 2.2.3 The Wests need to reduce their expenditures. Suggest TWO ways in which they can achieve this. Explain your answers. (4)
- 2.3 Mr West decides to sell one of his cars and wants to buy a motorbike in order to save money.
- 2.3.1 He bought his car for R98 000 and sells it for R55 000. Calculate Mr West percentage loss. (3)
- 2.3.2 Mr West buys a second-hand motorbike for R32 500 and decides to invest the remainder of the money in order to surprise his family with a boat cruise in 1,5 years' time.
- The investment he earns is 1,75% simple interest per month and he invests for 1,5 years. If the boat cruise costs R45 000 for the entire family, will Mr West have enough money after 1,5 years?

(5)

[26]

QUESTION 3

- 3.1 Michael has some special boxes in each cage which his lovebirds breed and lay eggs in. The picture below shows the dimensions of ONE box. EACH rectangular box is made of wood and has a circular opening through which the birds can climb into the box.



- 3.1.1 The diameter of the circular opening at the front of the box is 6 cm. Calculate the radius of the opening. (2)
- 3.1.2 Calculate how big the circular opening of the box is.
Use the formula:
Area of a circle = $\pi \times (\text{radius})^2$, where $\pi = 3,142$ (3)
- 3.1.3 Calculate the volume (space inside) of ONE box.
Use the formula:
Volume = length \times width \times height (2)
- 3.1.4 The area of the floor of the box is 221 cm². The roof of the box is 8% larger than the floor area. How big (in cm²) is the roof of the box? (3)

- 3.2 Michael wants to build more boxes for his bird cages. He makes a list of things he will need. He sets up a budget (table below) to determine how much ALL the items will cost to build ONE box:

ITEMS	QUANTITY NEEDED PER BOX	COST PER ITEM	TOTAL PER ITEM
Wood	2 000 cm ² = 0,2 m ²	R650,00 per m ²	2.5.3
Nails	9 per box	R0,50 per nail	9 × R0,50 = R4,50
Stick (in front of box)	1 stick	R2,50 per stick	1 × R2,50 = R2,50
Wood glue	1 bottle	R50,00 per bottle	1 × R50,00 = R50,00
TOTAL COST TO BUILD ONE BOX:			2.5.4

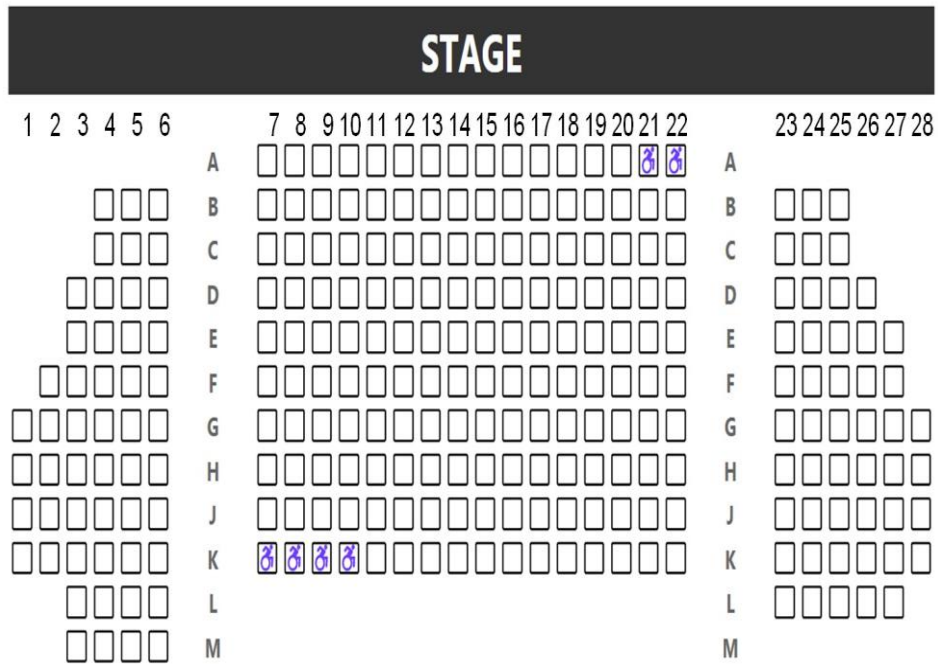
Use Michael's budget to answer the following questions.

- 3.2.1 How much does one bottle of wood glue cost? (2)
- 3.2.2 How many nails does Michael need to build a box? (2)
- 3.2.3 Calculate how much the wood will cost per box? (2)
- 3.2.4 Calculate the total expenses to build one box. (2)
- 3.2.5 Michael budgeted to spend R2 000 to build new boxes for his bird cages. How many boxes can he build with his budgeted amount? (2)

[20]

QUESTION 4

4.1 During Johan and his brother’s holiday they went to a concert. The seating plan of the concert is given in the diagram below. Study the layout of the seating plan and answer the questions that follow.



- 4.1.1 How many rows does this concert have? (2)
- 4.1.2 How many seats are in row G? (2)
- 4.1.3 How many seats are reserved for wheelchair use in total? (2)
- 4.1.4 If you move from seat D8 to seat D15, how many seats did you move to the right? (2)
- 4.1.5 Name ONE seat number that is the furthest from the screen? (2)
- 4.1.6 During the half-time break Johan decides to buy some snacks, while his friend wait at their seats. His friend is waiting for him at A10 and A11. If Johan is currently at L23, give Johan directions back to his friend. (4)

[14]

TOTAL: 75 MARKS