Grade 11
Time: 2 Hours
Examiner: Mr P Furstenburg

Bergvliet High School
Mathematical Literacy
Final Exam
Paper 1

November 2024
Marks: 100
Moderator: Mr B Siljeur

Name: _____ Teacher: FR / GW / SI / WM

Instructions:

- Answer all the questions
- Simplify all answers
- Round off ALL FINAL ANSWERS appropriately according to the given context, unless stated otherwise
- Read each question carefully and answer all questions on the question paper
- Use black or blue ink only and no correctional fluid is permitted
- Please write neatly and legibly
- This question paper consists of 7 pages including the cover page and ANNEXURES

Question	Assessment Marks	Learners Mark
1	25	
2	36	
3	25	
4	15	
Total	100	/ 100

QUESTION 1

Refer to the till slip depicted in ANNEXURE A and answer the following questions:

1.1.1 What does VAT stand for and how much is it charged at? (2)

1.1.2 How many zero-rated items are listed on the till slip? (2)

1.1.3 Calculate the cost of 500ml of almond milk (3)

1.1.4 Calculate the missing value A. (3)

1.1.5 At what time was the purchase made? (2)

1.1.6 Calculate the cost of the mixed salad, excluding VAT. (3)

1.2 The table below shows the statistics from a recent Women's Rugby World Cup.

RUGBY WORLD CUP STATISTICS			
Country	Points Scored	Tries Scored	Drop Goals
New Zealand	2303	311	10
Australia	1645	209	7
South Africa	1250	141	10
England	1379	147	21
France	1487	171	11

1.2.1 Is the data above discreet or continuous? (2)

1.2.2 Name the two countries that had the same number of drop goals. (2)

1.2.3 Determine the difference in points scored between Australia and South Africa. (2)

1.2.4 Which country scored the second highest amount of tries? (2)

1.2.5 Which country has an outlier in the drop goals statistics? (2)

[25]

QUESTION 2:

Hannah runs her own business selling handbags. The wholesale cost of one bag is R239,50. Hannah has to pay Cassidy R2 000 for the rental of her home office (Hannah sells her bags from here). Hannah sells her bags for R450,00 each.

2.1.1 Complete the table (Only write the letter and show your calculations for each): (8)

No. Bags sold	**0**	**1**	**50**
Income	**A**	**D**	22 500,00
Expenses	**B**	R2 239,50	**F**
Profit/Loss Rands	**C**	**E**	**G**

2.1.2 Hannah states that she must sell at least 9 handbags to make a profit.
Show with calculations whether her statement is valid or not. (4)

2.2 Hannah has a handbag that she bought years ago for a different cost price and intends selling this bag for R650 at a profit percentage of 40%. What was her original cost price? (3)

2.3

Hannah's business is growing and she needs to buy a delivery van. She found a good second hand van at a price of R100 000. She has two options to finance the purchase.

Option1: Her dad says that he will buy the vehicle for her and she can pay him back over 3 years at an interest rate of 8% compounded annually. No deposit.

Option 2: The bank will finance the van but she has to pay a 5% deposit and then they will charge an interest rate of 12% (Simple Interest) and she must pay it back over 4 years.

Using the above information, answer the questions that follow:

2.3.1 What will the total (including interest) be that she has to pay her dad back over 3 years? (4)

2.3.2 What deposit will she need to pay to the bank? (2)

2.3.3 How much will she pay to the bank over 4 years (Excluding the deposit)? (3)

2.3.4 Which option will be cheaper per month and why? (5)

2.4

Hannah opened a bank account and received her first credit card. During June she purchased R3500 worth of goods. The credit card statement arrived and she noticed the due date to be 31 August. She forgot to pay the card on the due date and only remembered to settle it on 15 September. The bank charges R250 late penalty fees plus interest at 32% per annum calculated on a daily balance.

2.4.1 What was the daily interest rate charged by the bank? (2)

2.4.2 What was the total bank charge, including the interest and late payment fee? (4)

[35]

QUESTION 3

The 1996 Census in South Africa collected information about the number of males and females in each province in our country. The information illustrated in the diagram and the table below was published by Statistics South Africa.

Refer to graph and table shown in ANNEXURE B and answer the questions that follow:

3.1.1 In which province was the percentage of males greater than the percentage of females? (2)

3.1.2 Verify using calculations, in which province is there the greatest difference between the percentages of males and females? (4)

3.1.3 Calculate the difference in the number of males in Gauteng compared to the number of males in KwaZulu-Natal. (5)

3.2 A person from the database of this census is chosen at random to represent South Africa as an ambassador at the Cricket World Cup.

3.2.1 What is the probability that the person chosen is from Mpumalanga? (2)

3.2.2 What is the probability that the person chosen is NOT from the Western Cape? (2)

3.3 Refer to the data set below recording the lengths and weights of **sharks** in the Atlantic Ocean over a certain period of time**.**

Gender	Length	Weight	Gender	Length	Weight	Gender	Length	Weight
Male	1.82	27	Male	1.97	46	Female	2.56	124
Female	2.22	95	Female	3.12	162	Female	2.38	102
Female	2.74	136	Male	2.81	55	Female	3.05	158
Male	1.93	31	Female	2.93	151	Male	1.91	28
Male	1.86	29	Female	3.30	180	Male	1.92	28
Male	2.42	43	Male	1.91	29	Female	2.54	120
Female	2.91	151	Male	2.12	32	Male	1.87	27

3.3.1 Calculate the mean weight of all the female sharks (3)

3.3.2 Calculate the median length of all the female sharks (3)

3.3.3 Calculate the range of the male sharks weights. (2)

3.3.4 Determine the mode/s of the male shark lengths. (2)

[25]

QUESTION 4

Jenna opens up a small sewing business. A copy of her monthly budget is shown below:

INCOME		EXPENSES	
Estimated Sales	**R12 000**	**Rent Expense**	**R4 500**
Interest on Investment	**R1 650**	**Water and Electricity**	**R1 200**
		Material costs	**R3 000**
		Salaries	**R4 000**

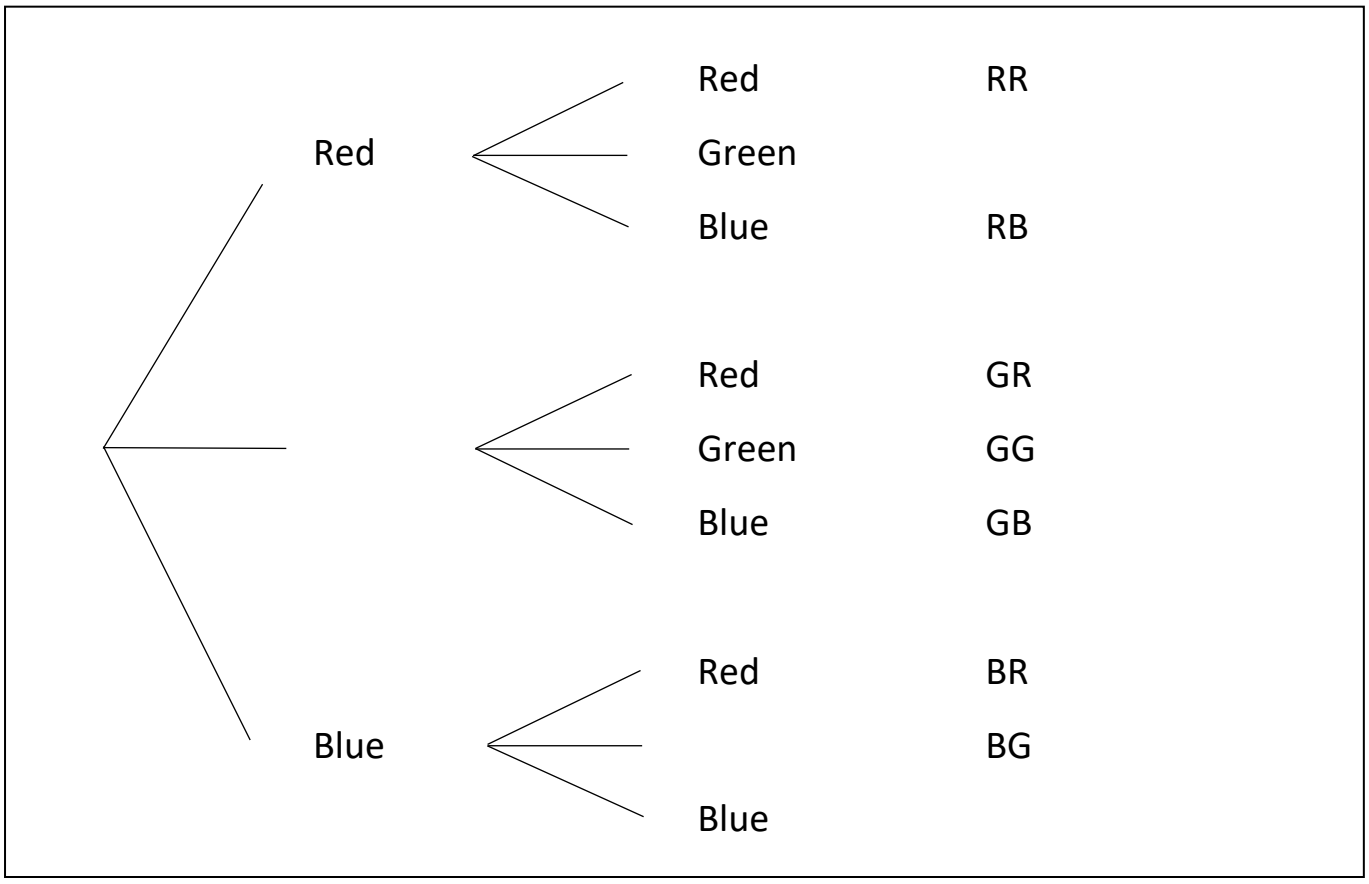
4.1 Using the information from the table above:

4.1.1 Calculate Jenna's provisional savings/profit each month. (3)

4.1.2 What percentage does the Interest on Investment of Jenna's income amount to? (3)

4.1.3 Which of the expenses listed above is considered to be a fixed expense? (2)

4.2 Jenna has a bag full of buttons, the contents of the bag include 10 blue (B), 6 red (R) and the rest are green (G). She selects 2 buttons at the bag without replacing them. The incomplete tree diagram showing the possible outcomes is shown below.



4.2.1 Complete the tree diagram above. (3)

4.2.2 Determine the probability: (2)

(a) of selecting any colour button together with a red button.

(b) of first selecting a blue button, followed by a yellow button.

[15]

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	Paper 1	
	ANNEXURES	

QUESTION 1
ANNEXURE A

All Organic

Everything your body needs,
nothing it doesn't.

~

35 Mckenzie St, St Lucia, KZN
035 590 1952
VAT no. 40123456789

~

31-05-2018 10:43
CASHIER – Louise Gardner

# Carrots 1 kg	R15,99
Coconut Sugar 300 g @R64,55	
*less promo R1,50	R63,05
# Lentils 500 g	R21,99
Mixed Salad 600 g	R35,99
# Ruby Grapefruit 4's	R22,49
Salmon Cuts 950 g	
@49,99 p/kg	A
Almond Milk 1 L 2@R45,00	R90,00
Sorghum Syrup 500 ml	R116,49
# Free Range Eggs 18's @R59,99	
*less promo R2,00	R57,99
DUE VAT INCL	R471,48
ROUNDING	00,00
CARD FNB	R471,48
CHANGE	00,00

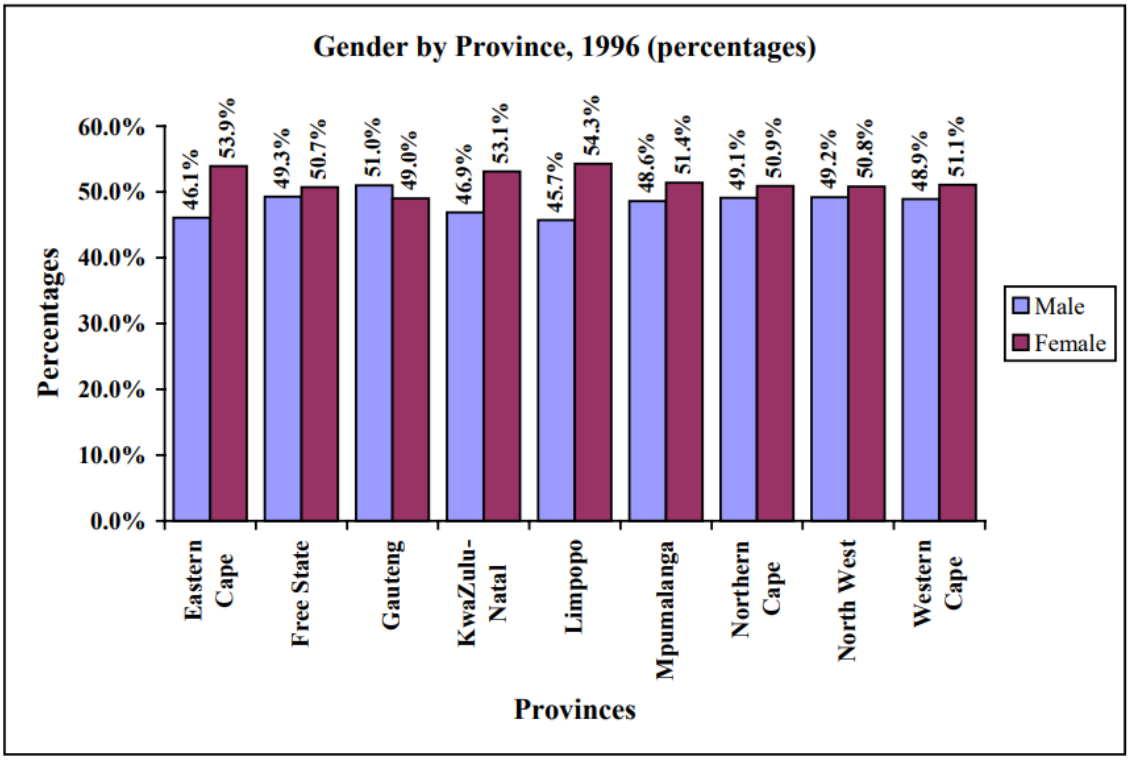
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--------- TAX INVOICE ---------
15% VAT B

Have a wonderful day!

- zero rated items

QUESTION 3
ANNEXURE B



Total Population Figures

Population of South Africa by Province, 1996	
Eastern Cape	6 302 525
Free State	2 633 504
Gauteng	7 348 423
KwaZulu-Natal	8 417 021
Limpopo	4 929 368
Mpumalanga	2 800 711
Northern Cape	840 321
North West	3 354 825
Western Cape	3 956 875
TOTAL	**40 583 573**