



Mathematical Literacy

Grade 11

June 2021

Examiner: Mrs Leuschke

Moderator: Mrs. D Lourens

MARKS: 100

TIME: 2 hours

NAME : _____

TEACHER : _____

INSTRUCTIONS AND INFORMATION

Read the following instructions carefully before answering the questions.

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

QUESTION 1

1.1 Merle bought R2 000.00 (excl. VAT) of canned products at the wholesaler. How much VAT did she have to pay if the VAT is 15%? (2)

1.2 Is a straight line graph the result of a constant ratio or constant difference between two sets of numbers? (2)

1.3 Convert 250ml to litres. (2)

1.4 Write ten minutes to nine at night in 24-hour digital format. (2)

1.5 If you work for a company, are you an employee or an employer? (2)

1.6 Three friends earned R10 200.00, R9 100.00 and R13 000.00 per month respectively as salary. Determine the range of their salaries. (2)

[12]

QUESTION 2

Mrs Day has a laundry business in town and charges:

- R16 per kg washing and drying
- R3 for Staysoft (fabric softener) per 5 kg
- R25 per kg for hand wash with Staysoft (fabric softener)
- R20 per 5 kg for ironing

2.1 How much will a person with 18 kg of washing pay for washing and drying with Staysoft (fabric softener) and ironing? (5)

A family has a helper coming on Mondays and Fridays for the month shown below for washing. They pay the helper R150 per day for washing and drying without ironing.

Use the calendar for March 2018 to answer the questions.

March 2018						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

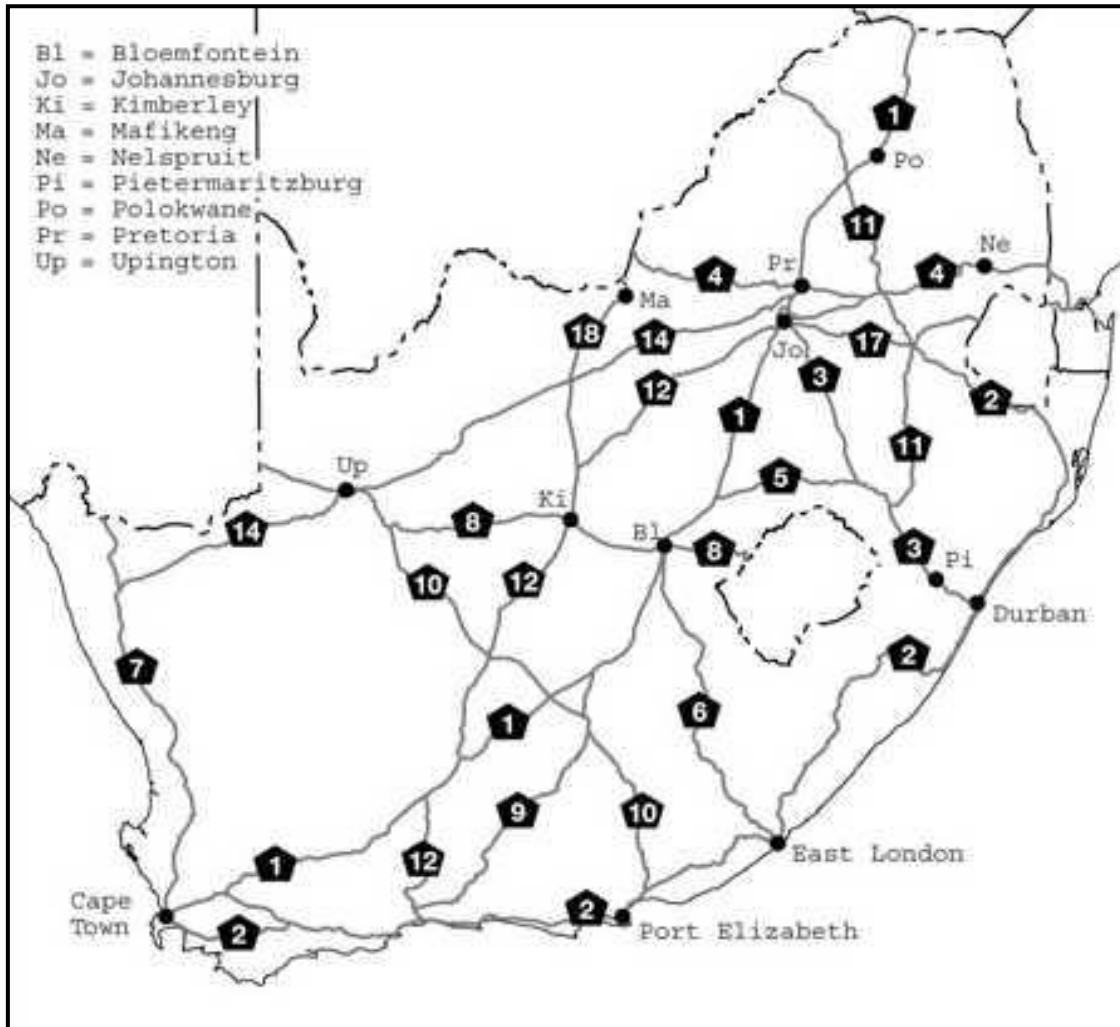
2.2 (a) The family claims that if they can take their washing every Friday to the laundry for washing and drying with Staysoft (fabric softener), instead of hiring a helper, they could save R70 per month. Verify, showing all calculations, whether their claim is valid if they have an average of 15 kg of washing and drying and 2 kg of hand wash for Fridays in March 2018. (8)

2.2 (b) Mrs Day says that the probability of having a Friday in March with a date as an even number is about 10%. Verify, showing all calculations, whether or not she is correct. (3)

[16]

Question 3

The questions are based on the following map:



3.1 How many national roads are shown on the map? (2)

3.2 If you start out in Cape Town and follow the N1 all the way to Polokwane, which towns will you pass through? (2)

3.3 Which two roads must you take in order to get from East London to Kimberley? (2)

3.4 Your friend Boris is taking a road trip from Johannesburg to East London. He also wants to stop at Durban along the way to visit an old friend. Which roads must he take? (2)

3.5 If you were in Mafikeng, in which direction would Durban lie? (2)

3.6 Which national road links Pretoria and Upington? (2)

Before starting his trip, Boris asks you for some advice concerning petrol and distances. He tells you that the fuel tank of his car holds 40 litres of petrol and he found that he has to refill the tank every 292 km.

3.7 How many kilometres does he get out of each litre of petrol? (3)

3.8 Boris says that he will need at least 15l of petrol to travel 100km. Verify, showing all calculations, whether or not he is correct. (3)

3.9 If petrol costs R6,89 per litre, how much will it cost to refill his car? Round your answer to the nearest whole rand (2)

3.10 If Boris travels 4 000 km, how many times will he have to fill up? (2)

3.11 Boris says that he will need to spend R3900 on petrol to travel 4000km. Verify, showing all calculations, whether or not he is correct. (3)

[25]

Question 4

The following advertisement for a cellphone appeared in a magazine from a network provider.



Huawei Y5 Prime 16GB 4G - Black
Dual Sim
★★★★★
R 1,948 ~~R 2,499~~ **22% Discount**
In Stock

Study the information above and answer the questions that follow.

4.1 The price was reduced from R2 499 to R1 948. Show how the 22% discount was calculated. (2)

4.2 The price of R1 948 includes Value Added Tax (VAT 15%). Calculate the VAT amount included in the price. (3)

[5]

Question 5

In December 2018, Statistics South Africa announced that the annual inflation rate was 4,5%.

5.1 In your opinion, what does inflation mean.. (2)

5.2 Calculate the price of a laptop in December 2018 if its price was R5 999 in December 2017. (3)

5.3 Use the information below to answer the questions that follow.

Sona won R50 000 with the LOTTO. She invested 75% of the amount that she won in a bank that offers an interest rate of 7,5% per annum compounded annually. She sent R10 000 to her sister studying in the United States of America (USA).

5.3.1 Determine the amount Sona invested with the bank. (2)

5.3.2 Calculate the total interest earned in 2 years by investing 75% of the amount won. (5)

5.3.3 Convert the amount Sona sent to her sister into USA dollars (\$). You may use the exchange rate: 1\$ = R14,38 (2)

[14]

QUESTION 6

The following data are the masses (in kg) of the players in the Springbok Rugby Squad that won the Rugby World Cup in 2019.

86 90 90 91 94 95 95 95 102 102 103 103 105 105
107 108 109 110 112 114 116 119 120 121 122 122 125

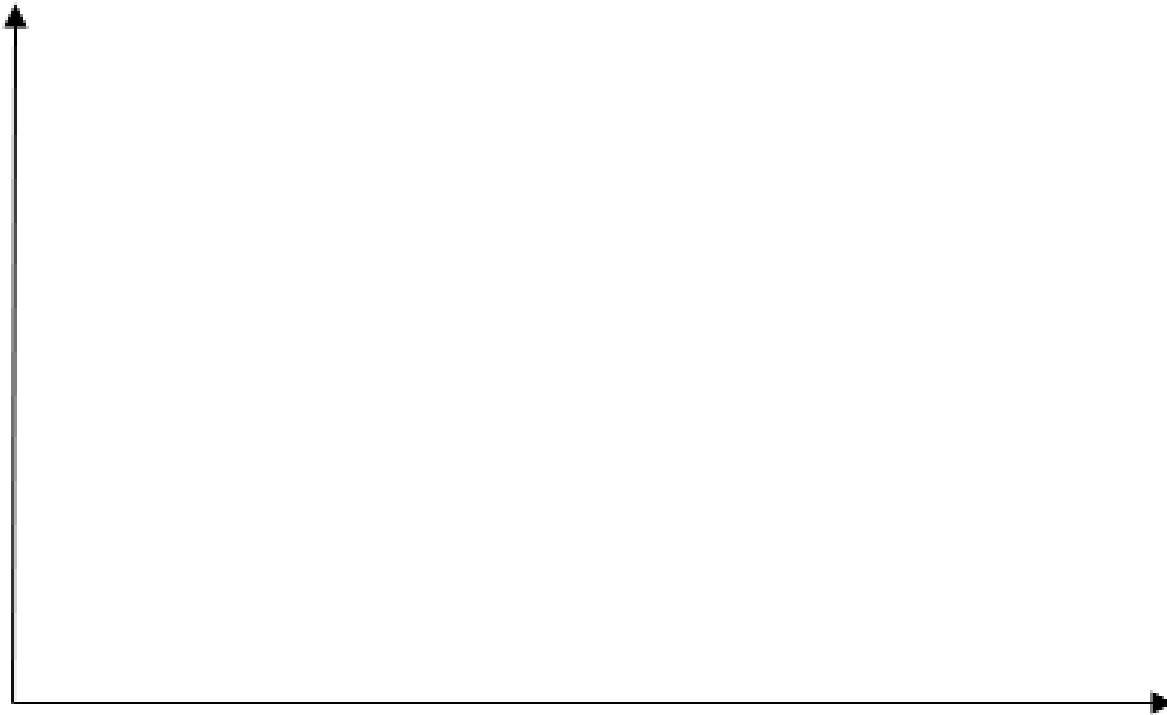
6.1 Calculate the mean of the data. (3)

6.2.1 Complete the tally table on your answer sheet. (6)

Class Interval (kg)	Tally	Frequency
80 – 89		
90 – 99		
100 – 109		
110 – 119		
120 – 129		

6.2.2 Use the frequency table to draw a histogram in the space provided on your answer sheet.

(4)



6.3 Calculate the Interquartile range for the data above.

(4)

QUESTION 7

Shirley went to the bank to request a printout statement from her bank, detailing her transactions from 25/01/2017 to 25/02/2017. Use the statement below to help you answer the questions that follow.

TEBA BANK				
Date	Description	Amount	Amount	Balance
25/01/2017	Salary	24 000,00		24 151,50
27/01/2017	Car insurance		-300,00	23 851,50
01/02/2017	Electronic transfer – Bond (PROPERTY)		-9000,00	14 851,50
01/02/2017	Debit order Healthsaver medical aid		- 1 500,00	13 351,50
02/02/2017	Debit order Mobi contract		-750,00	12 601,50
03/02/2017	Debit order Supa Fashion Store		-900,00	11 701,50
05/02/2017	Purchase at Shop 'n Save		-6000,00	5 701,50
14/02/2017	PAYMENT Mrs S Khumalo	500,00		6 201,50
20/02/2017	Automechanix		-3000,00	3 201,50
			TOTAL REMAINING:	3 201,50

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

7.2 List Sam's debits for the month. (3)

7.3 In the first line of the statement, Sam receives his salary. Calculate how much money Sam had in his account before his salary was paid. (2)

7.4 Sam wants to save 15% of his remaining money this month. Calculate how much he can save, and in your opinion does he manage his finances properly. (4)

[11]