LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
EDUCATION

NATIONAL SENIOR CERTIFICATE

GRADE 11

MATHEMATICAL LITERACY

CONTROLLED TEST

MARCH 2026

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MARKS: 100

TIME: 2 hours

This question paper consists of 9 pages, including the cover page.

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INSTRUCTIONS AND INFORMATION

1. This question paper consists of THREE questions
2. Answer **ALL** the questions.
3. You may use an approved calculator (non-programmable and non-graphical), unless stated otherwise.
4. Show **ALL** your calculations clearly.
5. Round off ALL final answers appropriately according to the given context, unless stated otherwise.
6. Indicate units of measurement, where applicable.
7. Maps and diagrams are NOT necessarily drawn to scale, unless stated otherwise.
8. Start EACH question on a NEW page.
9. Write neatly and legibly.



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QUESTION 1

1.1

Bhanu started a business of selling Cappuccino Coffee in cups. It costs him R9,50 to make a Cappuccino coffee cup. His daily fixed cost is R90,00 and he will be able to sell 100 cups of Cappuccino coffee per day. He sells the Cappuccino Coffee at R12,50 per cup.

No. of cups of Cappuccino Coffee	0	20	30	40	80	**Q**
Income in rand	0	250	375	**P**	1 000	1 250

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Use the above information to answer the questions that follow.

1.1.1 Define the term " Fixed cost" according to the given context. (2)

1.1.2 Identify the independent and dependent variable. (4)

1.1.3 Determine the selling price of ONE Cappuccino coffee. (2)

1.1.4 Determine the formula that will be used to determine the income received. (2)

1.1.5 Determine the value of P and Q in the table above. (5)

1.2

Dollar bakes 18 cakes for a farewell function of Bimbini crèche. He buys the ingredients according to the recipe he got from his father who was a baker. He decorated the cakes for free.

The recipe makes 18 cakes, and the ingredients and method are stipulated below.

INGREDIENTS	METHOD
2 cups of flour 1 cup sugar 2 teaspoons (tsp) of baking powder 2 cups milk 1 cup of oil/ 125g margarine 6 eggs 1 teaspoon vanilla essence	➢ Beat eggs, vanilla essence and sugar together. ➢ Sift dry ingredients ➢ Heat milk and oil/ margarine together for 2 minutes. ➢ Mix all the above ingredients ➢ Pour into prepared cake pans ➢ Bake for 25 minutes at 180°C

NB: 1 cup = 250 ml 1 teaspoon = 5 ml 3 grams = 5 ml

Use the above information to answer the questions that follow.

1.2.1 Convert 2 cups of flour into milliliters. (2)

1.2.2 Write the ratio of baking powder to eggs in the above recipe in the simplest form. (2)

1.2.3 Calculate how many eggs are needed by Dollar to make 72 sponge cakes. (3)

1.2.4 Convert 2 cups of milk into liters. (2)

1.2.5 The time for baking is 25 minutes. Convert those minutes to hours. (2)

1.2.6 Convert 380 ˚F to degrees Celsius. Round your answer to two decimal places. (4)

You may use the formula: $^{\circ}\mathbf{F} = \mathbf{(1{,}8 \times {}^{\circ}C) + 32^{\circ}}$

[30]



QUESTION 2

2.1

Two friends, Teddy and Michael, took part in a 15 km fun run marathon. The marathon started at 05:00 in the morning. The winner took 1, 2 hours to complete the marathon. Teddy took 1h23 min 12 sec and Michael took 1h39 min 4 sec.

Use the above information to answer the questions that follow.

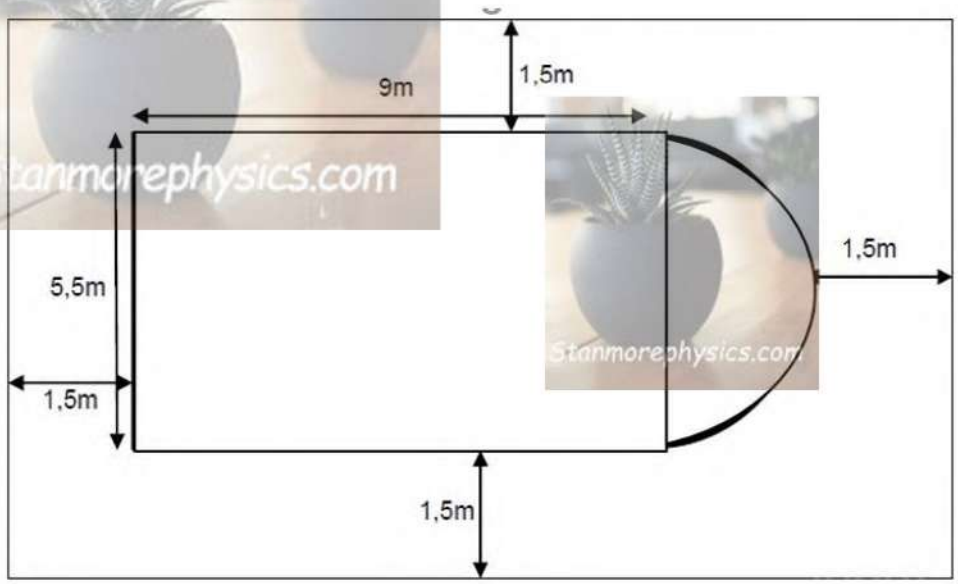
2.1.1 Express 1, 2 hours in hours and minutes. (2)

2.1.2 Determine how long Teddy had to wait for Michael at the finish line. (3)

2.2

Mr Adam Buys is a fish farmer who has a fishpond in his yard. He is planning to have a fence around the pond. The fence should be 1, 5 m away from the pond.

The diagram below shows the structure of Mr Adam Buys' pond.



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Use the information above to answer the questions that follow.

2.1 Define the term **"Perimeter"** according to the given context. (2)

2.2 Calculate the perimeter of the fence around the pond in metres. (6)

2.3 Determine the cost if fencing is sold in 5m rolls for R162,50 (4)

2.4 Determine the number of poles required to hold the fence if the poles are spaced with a maximum space of 1,8 m, there is a gate of 1 m in one of the sides and if there is to be a pole in every corner. (4)

2.5 Calculate the cheapest cost for all the poles if they are sold in bundles of 6 for R500 or as singles for R98,00. (3)

[24]

QUESTION 3

3.1

Una has a catering company, and she bought an urn to prepare tea for her customers. She uses a bucket to fill the urn.

The dimensions of the urn and the dimensions of the bucket are indicated below.



- **The height of the urn excluding the lid is 380 mm.**
- **The base of the urn is 4 cm high.**
- **The volume of the bucket is 18,46 litres.**

NB: 1 ℓ = 1 000 cm^3

Study the diagram above and answer the questions below.

3.1.1 Define the term **"Volume"** in this context. (2)

3.1.2 Determine the height of the bucket, rounded off to the nearest cm.

You may use the formula: **Volume = $\ell \times b \times h$** (6)

3.1.3 Show that the circumference of the urn is 138,248 cm.

You may use the formula: **Circumference = $\pi \times$ d**; where $\pi = 3,142$ (2)

3.2

Shirley boiled the water and wrapped the outer part of the urn (the steel part) with foil.

Use the information in **3.1** and information above to answer the questions below.

3.2.1 Determine the radius of the urn. (2)

3.2.2 Hence, calculate the area of the urn which was covered with foil.

You may use the formula: **Area to be covered = $2\pi r \times h$; where $\pi = 3,142$** (5)

3.2.3 Determine the volume of the urn.

You may use the formula: **Volume of urn = $\pi r^2 h$**; where $\pi = 3,142$ (2)

3.2.4 Give a reason for wrapping the urn with foil. (2)

3.3 Shirley uses a bucket to refill the urn. The bucket holds 18,46 liters of water.

Determine the number of buckets needed to refill the empty urn. (4)

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QUESTION 4

4.1

Maria runs a small motorcycle service business from home.

Given below is the budget drawn up by him for the new month.

INCOME	AMOUNT	EXPENSES	AMOUNT
26 Motorcycle services	R33 150,00	Detergents	R375,00
25 Car washes	R1 625,00	Motorcycle parts	…
		Water	R850,25
		Electricity	R1 500,00
TOTAL INCOME	**…**	**TOTAL EXPENSES**	**R7 927,86**

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Use the above information to answer the questions that follow.

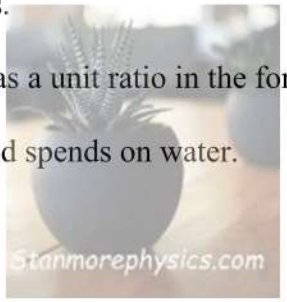
4.1.1 Explain the term "***Budget***" according to the given context. (2)

4.1.2 Calculate the total income. (2)

4.1.3 Calculate the amount spent on motorcycle parts. (2)

4.1.4 Write the amounts of Detergents to Electricity as a unit ratio in the form 1: ….. (3)

4.1.5 Calculate the percentage of total expenses David spends on water. (3)



4.2

Below is a till slip for Sasha's groceries. Study the till slip and answer the questions that follow.

PHUGWANI STORES
11TH STR.LIGHTDOVE
TEL: 015 964 5551
TAX INVOICE: VAT No. 44223377556699

Milk Tart	R17,99
Apple Crumble	R29,99
Carrier bag	R0,40
Carrier bag	R0,40
Marshmallow	R9,99
Dairy Custard	R17,99
Hot dog rolls	R6,65
Lemon Biscuits	R7,99
ENT. Bacon/egg 0,458 kg @R49,99/kg	R22,90
Sunflower Oil 250 ml	R14,99*
Popcorn	R7,99
Chicken Mayo Roll	R23,99
Brown Bread	R10,99*
Pumpkin Seed	R6,99*
Sauce Peri Peri	R13,99
Balance before VAT	R193,24
EFT credit card payment	R217,28

Tax Code	Taxable	Tax value
Zero VAT	R32,99	R0,00
VAT	R160,27	R23,73
Total Tax		R23,73

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Use the above information to answer the questions that follow.

4.2.1 Some of the items are marked with an asterisk (*), give a reason. (2)

4.2.2 Show how the amount of R22,90 for ENT.Bacon/egg was calculated. (3)

4.2.3 Show, by means of calculations, whether the VAT calculations are correct or not. (4)

[21]

TOTAL: 100

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