



Education and Sport Development

Department of Education and Sport Development
Departement van Onderwys en Sportontwikkeling
Lefapha la Thuto le Tlhabololo ya Metshameko

NORTH WEST PROVINCE

**NATIONAL
SENIOR CERTIFICATE**

GRADE 11

ENGLISH

MATHEMATICAL LITERACY P2

JUNE 2017

MARKS: 75

TIME: 1,5 hours

This question paper consists of 7 pages, 1 answer sheet and an addendum with 2 annexures (3 pages).

INSTRUCTIONS AND INFORMATION

1. This question paper consists of THREE questions. Answer all questions.
2. 2.1 Answer QUESTION 1.2.4 on the attached ANSWER SHEET provided.
2.2 Write your name on the space provided and hand in the answer sheet with your ANSWER SCRIPT.
2.3 Use the ANNEXURES in the ADDENDUM to answer the following questions:
ANNEXURE A for QUESTION 1.3
ANNEXURE B for QUESTION 3.1
3. Number the answers correctly according to the numbering system used in this question paper.
4. You may use an approved calculator (non- programmable and non- graphical), unless stated otherwise.
5. Show ALL calculations clearly.
6. Round off all final answers appropriately according to the given context, unless stated otherwise.
7. Indicate units of all measurement, where applicable.
8. Diagrams are NOT necessarily drawn to scale, unless stated otherwise.
9. Write neatly and legibly

QUESTION 1

1.1

Bakang Secondary School preferred to give Grade 12 learners sandwiches for the Last Push meal. The school requested Masakhane Bakery to provide them with 50 loaves of bread daily.

Masakhane Bakery has the following recipe for baking a loaf of bread.

Recipe for a loaf of bread:

0,5 kg flour
1 teaspoon salt
1 cup of water
7,5 g yeast
150 g dried fruit mix



Use the information above to answer questions that follow.

1.1.1 Masakhane Bakery wants to make 50 loaves of bread.

Calculate the amount of dried fruit mix they will need in kilograms. (3)

1.1.2 A newly appointed employee at Masakhane commented that 0,25 kg of yeast will not be enough to bake 50 loaves of bread.

Verify whether this comment is valid. (4)

1.2

Masakhane Bakery is spending R400 on electricity and water weekly. The cost of baking one loaf of bread is R3,50 which includes labour and ingredients. A loaf of bread is sold at R6,00.

The TABLE below shows the weekly cost of baking loaves of bread.

TABLE 1: Weekly cost of baking loaves of bread

Number of loaves	0	40	80	120	160	240	280
Total cost (in rand)	400	540	680	A	960	1 240	1 380

The TABLE below shows the income from selling loaves of bread.

TABLE 2: Weekly income from selling loaves of bread

Number of loaves	0	40	120	150	B	250	280
Total income (in rand)	0	240	720	900	960	1 500	1 680

Use TABLE 1, TABLE 2 and the ANSWER SHEET to answer questions that follow.

1.2.1 Determine the values of **A** and **B**. (4)

- 1.2.2 Write down the formula for calculating the cost of baking loaves of bread in the form:

Cost (in rand) = (2)

- 1.2.3 Use the formula in Question 1.2.2 to calculate the cost for baking 50 loaves of bread. (2)

- 1.2.4 The graph illustrating income received by Masakhane Bakery from selling loaves of bread is drawn on the ANSWER SHEET. Use the values from Table 1 to draw the graph illustrating the cost of baking loaves of bread on ANSWER SHEET. (5)

- 1.2.5 Determine the break-even point (2)

- 1.2.6 Calculate the profit if 200 loaves of bread were sold. (3)

- 1.2.7 The manager of Masakhane Bakery claims that if they bake 200 loaves and sell all of them, the bakery will make a profit of more than 10% of the cost for baking the 200 loaves.

Verify, showing ALL calculations, if the claim is valid. (3)

- 1.3 Last Push timetable for Bakang Secondary School is provided on ANNEXURE A. The staff agreed that Languages should be given 15 % of the total time for Last Push.

Determine, showing ALL calculations, whether 15 % of the total time for Last Push is given to Languages. (4)

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QUESTION 2

- 2.1 Palesa and her family own a house in Temba area. They use an average of 324 kWh of electricity a month.

The TABLE below shows the electricity tariffs in Palesa's area.

TABLE 3: Residential tariff rates inclusive of VAT for electricity in Palesa's area

Block	Usage	Charge(c/kWh)
Block 1	0 – 350 kWh	117,86
Block 2	350- 600 kWh	163,19
Block 3	> 600 kWh	200,34

Use TABLE 3 above to answer questions that follow.

- 2.1.1 Calculate the total monthly cost (in rand) of electricity. (3)
- 2.1.2 In a particular month, the family consumed 594,8 kWh of electricity.
Calculate the total cost in rand for electricity in that particular month. (5)
- 2.1.3 State ONE possible reason why the cost for electricity has increased in that particular month. (2)

2.2

Palesa is a member of the fitness gym. She is 1,54 m tall and weighs 67 kg. The instructor of the gym calculates the body mass index (BMI) on monthly basis to determine the health status of all the members.

You may use the following formula:

$$\text{BMI} = \frac{\text{mass}}{(\text{height})^2}$$

The TABLE below shows the health status according to the BMI:

TABLE 4: Health status according to the BMI

BMI	Health Status
Below 18 kg/m ²	Underweight / Malnourished
Between 18 kg/m ² and 24,9 kg/m ²	Normal
Between 24,9 and 29,9 kg/m ²	Overweight
Above 29,9 kg/m ²	Obese

Use information above to answer the questions that follow:

- 2.2.1 Calculate Palesa's BMI in kg/m² (rounded off to ONE decimal place). (3)
- 2.2.2 Identify Palesa's health status (2)
- 2.2.3 In a particular month, Palesa lost too much weight such that her health status also changed. Give one possible reason. (2)
- 2.2.4 One day at the gym, Palesa collapsed and was taken to hospital. On her arrival at hospital, her temperature was 43°C. Convert her temperature to °F (rounded off to the nearest 10°F).

You may use the following formula:

$$^{\circ}\text{C} = (^{\circ}\text{F} - 32) \div 1,8 \quad (4)$$

QUESTION 3

3.1 Use Lighthouse Foundation Financial Report for 1 March 2006 to 28 February 2007 provided on ANNEXURE B to answer the following questions:

3.1.1 There is a claim that the subsidy from the local municipality is 70% of the total income. Verify, showing calculations, whether the claim is valid. (4)

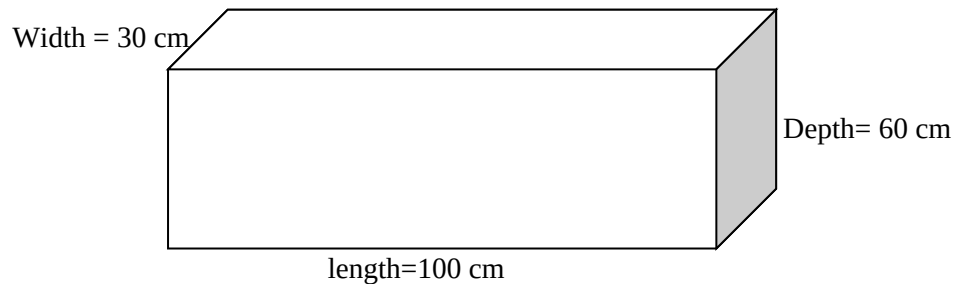
3.1.2 Show that the average cost of ONE school uniform for 27 children (rounded off to the nearest R10) is R370. (2)

3.1.3 Mr Le Roux, who is a board member of Lighthouse Foundation, states that donations from overseas are over ¥700 000. Verify whether Mr Le Roux's statement is correct.
NOTE: 1 Japanese Yen (¥) = R0,08. (3)

3.1.4 Give ONE example of transport cost. (2)

3.2

Mr. Le Roux's business of selling fish tanks is growing. He intends to buy bigger tanks that can carry 26 fish. Available tanks at the factory are 30 cm wide, 100 cm long and 60 cm deep.



NOTE: 1 fish needs at least 7 litres of water

$$1\ 000\ \text{cm}^3 = 1\ \text{litre}$$

$$\text{Volume} = \text{length} \times \text{width} \times \text{depth}$$

Use the information above to answer the questions that follow:

3.2.1 Calculate the volume of the tank in litres. (3)

3.2.2 Will 26 fish fit in the tank? Justify your answer using calculations. (3)

3.2.3 Convert the volume of the tank to gallons (rounded off to the nearest gallon)
CONVERSIONS: $1\ \ell = 1,7598\ \text{pint}$ and $1\ \text{pint} = 0,125\ \text{gallons}$ (5)

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TOTAL MARK: 75

ANSWER SHEET

QUESTION 1.2.4

Name:.....

Class:.....

