

Hillcrest High School

Grade 11

MATHEMATICAL LITERACY P2

JUNE 2023

MARKS: 75

TIME: 1½ Hours

EXAMINER: Mrs J. Leuschke

MODERATOR: Ms G.Stow

Instructions:

Read the following instructions carefully before answering the questions.

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

Question 1

The recipe below shows some of the ingredients needed to make small pancakes. The amounts shown below are some of the ingredients needed to serve 12 people.

SOME INGREDIENTS	CONVERSION TABLE
500g all- purpose flour	1000g=1kg
0,5 teaspoon kosher salt	1cup=250ml
2cups of milk	1pint=473,18ml

Use the above recipe and conversion table to answer the questions that follow.

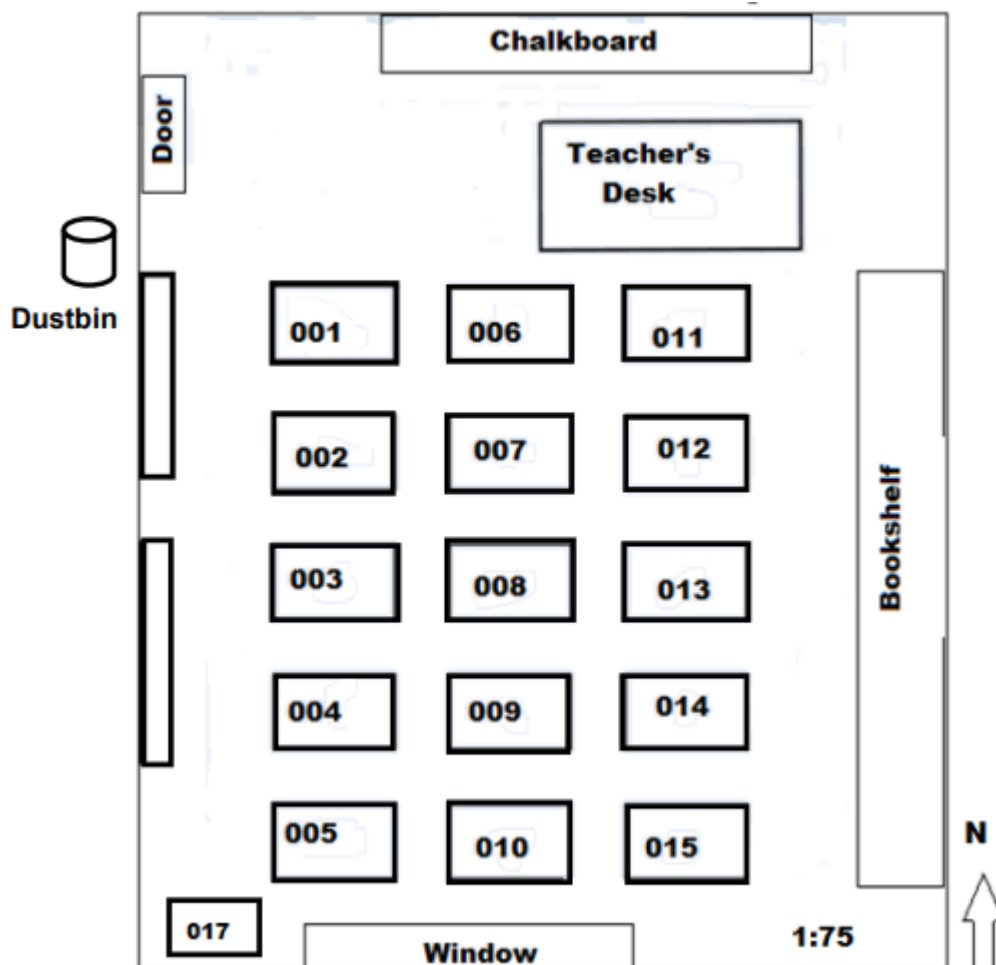
- 1.1 Convert the milk used in the recipe to pints. (2)
- 1.2 The all-purpose flour costs R29,99 per kg. How much will the flour for the above recipe cost? (2)
- 1.3 How many batches of the recipe will you have to make to have enough for 96 people? (2)
- 1.4 Calculate the amount of kosher salt that you need to make pancakes for 96 people. (2)
- 1.5 The stove plate needs to be at a temperature of 190°C. Use the formula below to convert the temperature to degrees Fahrenheit. (2)

$$^{\circ}\text{F} = (1,8 \times ^{\circ}\text{C}) + 32^{\circ}$$

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Question 2

2.1 Grade 12 learners use stickers with their examination numbers that are stuck on their desks. Study the classroom seating plan below for Grade 12 learners during their final examination in 2015 and answer the questions that follow.



2.1.1 Give the compass direction of a learner with examination number 008 from learner with examination number 005. (2)

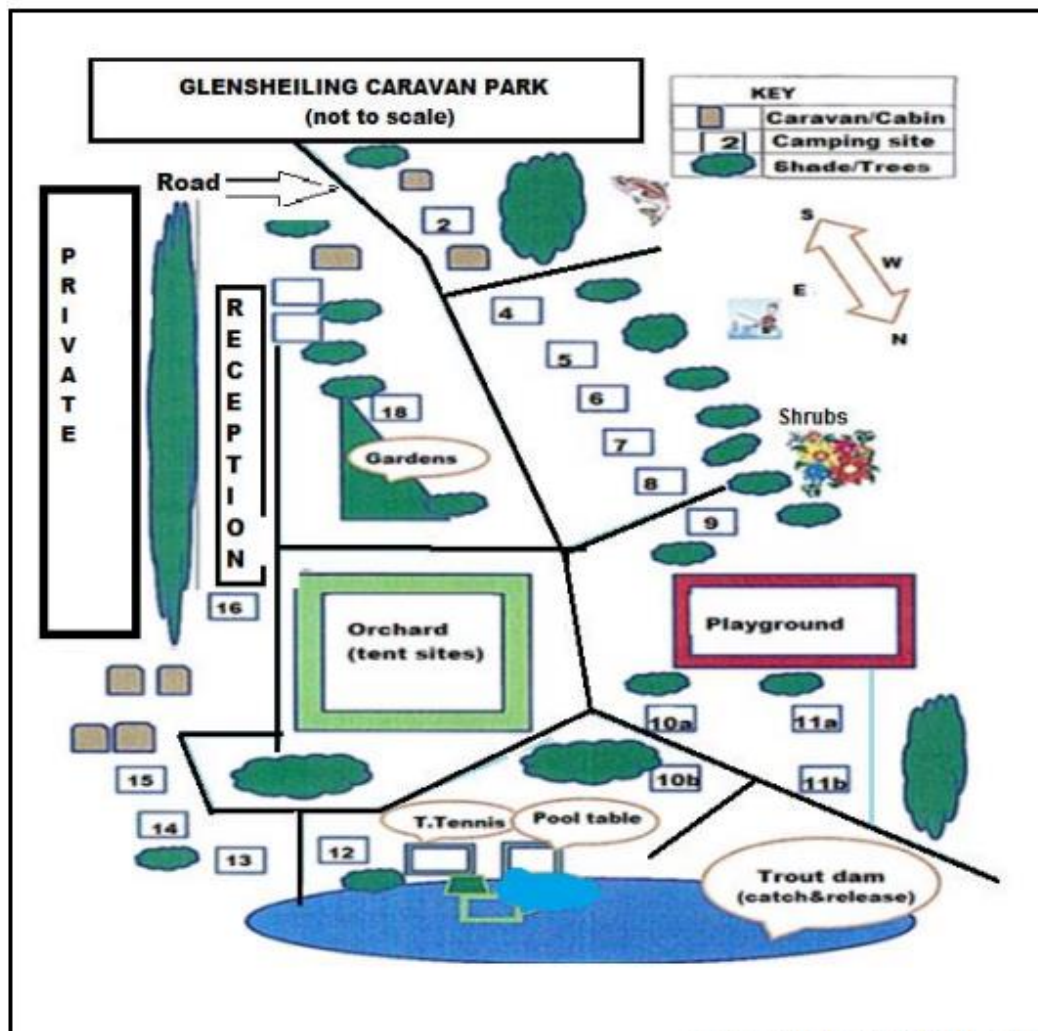
2.1.2 Give the scale of the map. (2)

2.1.3 Calculate the actual dimensions of the bookshelf in metres if the length on the plan is 7,5cm and the width on the plan is 1,1cm. (4)

2.1.4 Determine the number of learners that started writing their examination on time for this session if all desks were occupied. (2)

2.1.5 Acks, a learner with an examination number 015 arrived late. She was not allowed to walk in between the other desks. Draw the route she used to reach her desk. (2)

2.2 Below is the map of Glensheiling Caravan Park in KwaZulu-Natal.



[Source: www.glensheiling.co.za]


Use the map of Glensheiling Caravan Park above to answer the following questions.

- 2.2.1 Leeckay is at reception and informed that 11b is allocated to him. Write down the directions for him to get to his camping site. (3)
- 2.2.2 Determine the number of caravans/cabins shown on the layout. (2)
- 2.2.3 One camping site has trees and shrubs behind it and one tree adjacent to it. Write down the number displayed on this camping site. (2)
- 2.2.4 Name ONE of the recreational facility close to the Trout Dam. (2)

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Question 3

Mbeki went to Monyakeng Community Library to study how scales are used in Maps. She discovered that scales can be represented in different formats as below:

Scale 1	Scale 2
	1 : 100
0m 10m 20m	

3.1 Study the scale formats above and answer the questions that follow.

3.1.1 Give the names of the two scales represented above. (2)

3.1.2 Complete the statement below by choosing the appropriate answer.

To use the scale 1 above, you need to

- A know that 20m is equivalent to 100km
- B measure how long one segment of the bar is with your ruler
- C have both types of scales on the map (2)

3.1.3 Explain the meaning of the scale 1:200. (2)

3.2 An adopted map of South Africa that was used in a Grade 12 Mathematical Literacy lesson is shown below.



Use the map to answer the questions that follow.


3.2.1 Write down the grid reference for Durban. (2)

3.2.2 If the map distance between two places is 12,5cm, use the given scale to calculate how far this is in real life. Give your answer rounded off to the nearest whole km. (4)

[12]

Question 4

4.1 Jimmy plans to visit his family in America during the Easter holidays. His aunt, Suzie, asked him to bring along his mother's miltkart recipe because she would like to make it for her family.

MILKTART FILLING	
Serves: 6 – 8 people	Ingredients
	<ul style="list-style-type: none"> • 1 pint milk • 85 g flour • 1 pinch of salt • 30 g margarine • 100 g sugar
	Cinnamon sugar for taste
[Adapted from https://www.epicurious.com/recipes]	
Hint:	
Secret to get it to set properly is in the baking: Bake at 220 °C for 20 minutes and then reduce heat to 200 °C for the last 5 minutes.	

Use the information above to answer the questions that follow.

4.1.1 Write out °C in words. (2)

4.1.2 By how many degrees should the heat be reduced in the last 5 minutes of baking? (2)

4.1.3 Calculate the total baking time suggested according to the hint. (2)

4.1.4 Jimmy tells his aunt that with 340g of flour you will be able to make milk tart for a minimum of 24 people. Verify, showing ALL calculations, whether or not he is correct. (4)

4.1.5 Jimmy’s aunt normally buys a 2,5kg bag of sugar when she does her shopping. Calculate the sugar required in the recipe, as a percentage of the quantity usually purchased by her. (3)

4.2 Suzie is not familiar with using imperial units. Jimmy must convert the recipe before giving it to her.

The table below shows the conversion factors that are in the front of the recipe book.

MASS		
Ounce to grams	1 ounce (oz)	28,3495 grams (g)
Pounds to grams	1 pound (l b)	453,592 grams (g)
VOLUME		
Pints to milliliters	1 pint	473,17625 ml
Tablespoons to milliliters	1 tablespoon	15 ml
Teaspoon to milliliters	1 teaspoon	5ml
Cups to milliliters	1 cup	250 ml

[Adapted from www.metric-conversions.org]

Use the table above to answer the questions that follow.

4.2.1 Suzie says that she will need a minimum of 3 cups of milk. Verify, showing ALL calculations, whether or not she is correct. (4)

4.2.2 Convert the amount of margarine to ounces. (2)

4.2.3 Convert 200°C to °F. You may use the formula below. (3)

$$^{\circ}\text{F} = (1,8 \times ^{\circ}\text{C}) + 32^{\circ}$$

4.2.4 Determine how long it will take Suzie to bake 24 tarts if the oven can take 8 tarts at a time. Give your answer in hours and minutes. (5)

4.2.5 Suzie claims that the number of pints she will use to make the milk tart filling for 8 tarts, will be less than 5 litres of milk when converted. Verify, by showing ALL calculations, whether her statement is correct. (5)

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