

GRADE 10
MATHEMATICAL LITERACY
JUNE 2014

MARKS: 100

TIME: 2 hours

This question paper consists of 7 pages, including this one.

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MODERATOR: MRS J LEUSCHKE

INSTRUCTIONS AND INFORMATION

1. This question paper consists of EIGHT questions. Answer ALL the questions.
2. Number the answers correctly according to the numbering system used in this question paper.
3. You may use an approved calculator (non-programmable and non-graphical), unless stated otherwise.
4. Show ALL the calculations clearly.
5. Round off ALL the final answers to TWO decimal places, unless stated otherwise.
6. Start EACH question on a NEW page.
7. Write neatly and legibly.

QUESTION 1

Sifiso bakes cupcakes for fundraising at school. He needs water, milk, sugar, salt vanilla essence and margarine to make the cupcake bases.

The table below shows conversions between millilitres (ml) and grams (g) for certain ingredients used in cooking.

TABLE 1: Conversion table

Ingredients	5 ml	12,5 ml	100 ml	250 ml
Flour	3 g	8 g	60 g	150 g
Margarine	5 g	12,5 g	100 g	250 g
Milk	5 g	13	102g	255g
Sugar	4 g	g	80 g	200 g

1 cup = 250 ml; 1 tablespoon = 12,5 ml; 1 teaspoon = 5 ml

Use the information and the table above to answer the following questions:

- 1.1 The cupcakes need to bake for 45 minutes. Write this in hours (2)
- 1.2 How many grams of sugar make up 100ml (1)
- 1.3 Sifiso uses 2 tablespoons of margarine in his recipe. How many grams is this. (3)
- 1.4 Lindi uses 4 cups of milk for one very large batch. How many litres of milk is this. (3)
- 1.5 Lindi has a 2.5kg bag of flour to use with the recipe.
 - 1.5.1 Convert 2.5kg to grams (2)
 - 1.5.2 How many batches can she make if she uses 312.5g of flour for one batch (2)
- 1.6 The picture below shows the dial/knob of the oven, (using gas marks). Position 0 indicates off, and position 6 means hottest setting



The cupcakes should be cooked on a medium heat. Which marker do you think he should set the oven to

(2)

[15]

SHOP 'N GO	
Telephone No.: 048 850 2132 Your cashier is Phumla Jakè.	
Carry Bag 24 ℓ	
2 @ 0,39	0,78
Rocher T8 Heart 100 g	31,99
Nescafé Cappuccino Choc	46,99
Zillions Fruit Chews	
4 @ 2,99	11,96
Microwave Popcorn Butter	
3 @ A	32,97
Cookies Brownies 225 g	24,99
Crackers Original S/G	3,99
Still Spring Water 500 mℓ	4,29
NN Lemon Creams 200 g	6,99
Sugared Gummy Tub 300 g	21,99
Orbit Professional White Gum	6,79
Mangoes	
2 @ 4,00	8,00 #
1 PAR Gouda Seal Wedge	18,90
JIVE Tropical Cup 150 mℓ	14,50
Fanta Zero 2 ℓ	14,89
Rapport Koerant 1's	13,00
Still Spring Water 1,5 ℓ	6,99
Sprite Zero 2 ℓ	14,89
Ice Cream Chocolate	39,99
	DUE VAT INCL. 324,89
	CASH 400,00
	ROUNDING -0,04
	CHANGE
	TOTAL ITEMS
-----TAX INVOICE-----	
VAT included @ 14,0%	38,92
Zero rated #	

QUESTION 2

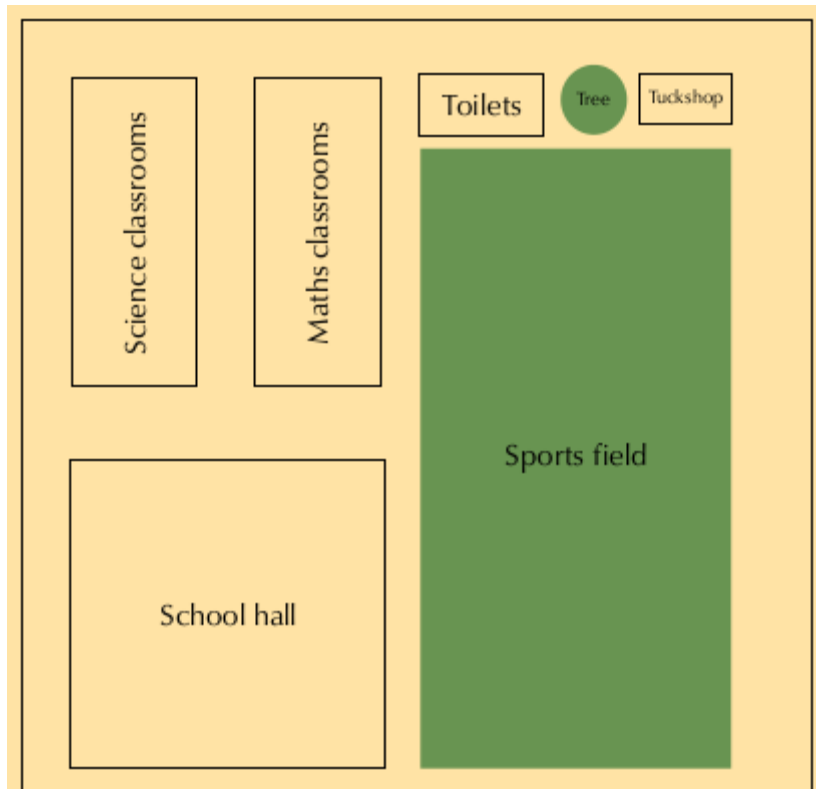
Above is the invoice Mr le Roux received from his local store.

- 2.1 How many items did Mr le Roux purchase? (2)
- 2.2 Calculate A, the price per unit of popcorn (2)
- 2.3 Calculate the amount due if the store had to round down to the nearest 10c (2)
- 2.4 Mr le Roux paid with 2 R200 notes. How much change should he get (2)
- 2.5 Name the item which is zero-rated on this slip (2)
- 2.6 How much VAT in total does Mr le Roux pay in total (2)

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QUESTION 3

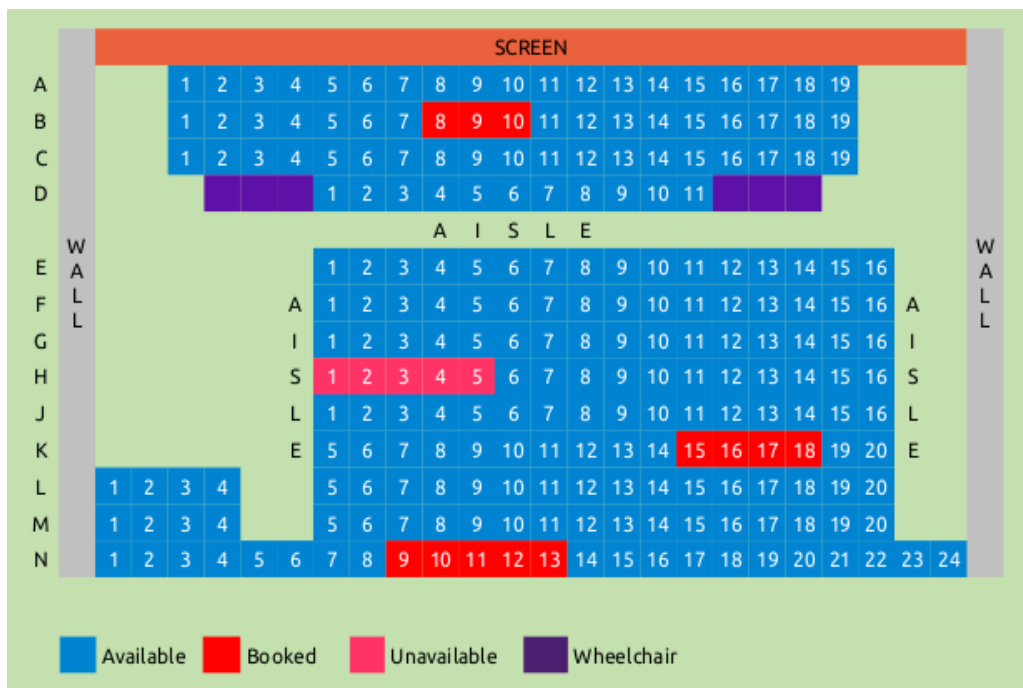
Below is a map of a small school in Inanda



- 3.1 The school hall 25m wide. Using that measurement, estimate the length of the sports field. (3)
 - 3.2 What scale system would be better suited for this diagram. A number scale or a bar scale (1)
 - 3.3 What is the distance between the School Hall and the Science classrooms. (2)
- [6]**

QUESTION 4

To the right is a cinema seating plan.



- 4.1 If you wanted to book for a movie for you and a friend, where would you book? (2)
 4.2 Are seats N11 and N12 available (1)
 4.3 How many seats are there available in row K (2)
 4.4 You have a friend who wants to join you, but they are in a wheelchair. Where is the best place to sit, given YOU may not sit in wheelchair seats. (2)
 4.5 What fraction of Row N has been booked already? (3)
 4.6 What percentage of the theatre is still available (5)

QUESTION 5

The triangle is 6 tiles long and 3 tiles high.
 The circle has a diameter of 4 tiles.
 The rectangle is 4 tiles long and 2 tiles high.
 The square is 2 tiles high.
 Each tile on the playground is a square with a length of 15 cm.

Circumference of a circle = $\pi \times \text{diameter}$
 Area of a circle = $\pi \times (\text{radius})^2$
 Area of a rectangle = length \times width
 Area of a triangle = $0.5 \times \text{base} \times \text{height}$
 Use $\pi = 3,142$ where applicable.

- 5.1 Use the appropriate formula to calculate the area of
 5.1.1 The triangle (3)
 5.1.2 The circle (4)
 5.2.1 If I wanted to lay a piece of string around the edges of the rectangle and the square, how much string would I need to buy. (4)
 5.2.3 How much cash would I need if it was going to cost R19.50 per metre (2)

[13]

QUESTION 6

6.1 Write the following time in the 24 hour format (show all your calculations)

- a) Jane goes to bed at 9:56 p.m. (2)
- b) The local shop opens at 8:30 a.m. (2)
- c) Archies cricket practice ends at 4:05 p.m. (2)

6.2 What unit of time would I measure the following in

- a) The time it takes a person to run 100m. (1)
- b) A taxi ride from Hillcrest to Bothas Hill. (1)
- c) The amount of time you spend at school each day. (1)
- d) The duration of a cricket test match. (1)
- e) Your age. (1)

[11]

QUESTION 7

The number of visitors to a new museum increases by 150 visitors each month for it's first 6 months.

7.1 Copy the following table onto your answer booklet, and fill in the blanks (3)

Month	1	2		4	5	
Number of Visitors	150	300	450		750	900

- 7.2 Write down a set of ordered pairs for this relationship (2)
- 7.3 Using the grid provided, plot the points from the table above. (6)
- 7.4 Would you connect the points with a solid line? Explain. (3)
- 7.5 Which quantity is the dependant variable, and which is the independent variable? Explain your answer. (4)

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QUESTION 8

8.1 Write out each of the following numbers in words

- a) 12 341 (3)
- b) 1 000 010 (3)

8.2 Write the following words as numbers

- a) Four hundred and sixty thousand, five hundred and forty two. (2)
- b) Fourteen million, six hundred and one thousand, (2)

[10]

TOTAL: 100