education
MPUMALANGA PROVINCE
REPUBLIC OF SOUTH AFRICA

MPUMALANGA DEPARTMENT
OF EDUCATION

NKANGALA DISTRICT

GRADE 11

CONTROL TEST

MATHEMATICAL LITERACY

MARCH 2025

MARKS: 60

TIME: 1hour30mins

This question paper consists of 7 pages including 1 Annexure

INSTRUCTIONS AND INFORMATION

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1. This question paper consists of THREE questions. Answer ALL the questions.

2. Use the ANNEXURE in the ADDENDUM to answer the following questions:

    • ANNEXURE A for QUESTION 1

3. Number the answers correctly according to the numbering system used in this question paper.

4. Start EACH question on a NEW page.

5. You may use an approved calculator (non-programmable and non-graphical), unless stated otherwise.

6. Show ALL calculations clearly.

7. Round off ALL final answers appropriately according to the given context, unless stated otherwise.

8. Indicate units of measurement, where applicable.

9. Diagrams are NOT necessarily drawn to scale, unless stated otherwise.

10. Write neatly and legibly.

QUESTION 1

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1. Ms. Oliver received her monthly account statement for July 2019. Study the invoice in ANNEXURE A and answer the questions that follow:

1.1	Write down the date of the invoice.	(2)
1.2	How many days does Ms. Oliver have to pay his account, from the date of the statement until the due date?	(2)
1.3	Define invoice according to the context.	(2)
1.4	Who is the service provider?	(2)
1.5	Show how the invoice total amount was calculated.	(2)
1.6	Write down the ratio of VAS-Balance Notification amount to VAS-Balance Notification Total	(2)
		[12]

QUESTION 2

2 Study the ingredients below of how to make fat cakes and answer the questions

INGREDIENTS MAKES 10 FAT CAKES



- 25,2 ounces of flour
- $1\frac{1}{2}$ teaspoons salt
- 2 tablespoon sugar
- 1 packet yeast
- Lukewarm water
- Cooking oil (for frying)

NOTE:
1 cup of flour = 4.2 ounces
1 cup = 250 ml
1 tablespoon = 15 ml

2.1 2.1.1 How many ml of sugar will be needed to make 10 fat cakes?

(2)

2.1.2 In the cooking instructions, it indicates that the oil must be heated to 375 °F before frying the fat cakes.
Convert 375 °F to °C. Round off your answer to the nearest ten degrees Celsius.

The following formula may be used:
°F = 1.8 x °C + 32

(4)

2.2 Mr. Kobe is an athletics teacher at Melody High School. To prepare for the school's regional athletics competition, he encourages the athletes to run every Saturday morning. He keeps the record of their starting time and finishing time in table below.

TABLE 1: Record of starting and finishing time for each runner

Runner	Zoey	Siyanda	Leroy	Princess	Chris	Nhlanhla
Starting time	10:00	10:00	10:00	10:00	10:00	10:00
Finishing time	11:51	10:59	11:16	11:44	11:22	11:05

Use the table above to answer the questions that follow:

2.2.1 How many athletes are trained by Mr. Kobe? (2)

2.2.2 Write the finishing time for Chris in a 24-hour format. (2)

2.3 Ayanda and his friends plan a tour across South Africa. The tour is set to stretch from Port Elizabeth down the Garden route to Cape Town. They investigated the rates for Shlobo Car hire and eNIGMA Car Rental. The distance from Port Elizabeth to George is 335km and from George to Cape Town is 434km.

The table below gives the cost for the two rental options.

COMPANY/DISTANCE (In km)	0	50	100	**B**	1000	2000
SHLOBO CAR HIRE	**A**	175	375	1400	3500	7000
ENIGMA CAR HIRE	0	2000	2000	2075	2975	4475

NOTE
Enigma car hire: Cost = R2000 + R1,50 × (distance − 350 km)
Shlobo car hire: Cost = R3,50 × distance

2.3.1 Calculate the values of A and B (4)

2.3.2 Identify the dependent variable. (2)

2.3.3 Use the formula provided to show by calculation which option would be the best rental for the boys to tour with? (5)
[21]

QUESTION 3

3.1 Miss Mendes lives in Ridgeview Estate and has a circular swimming pool with dimensions as shown below. The pool is situated at the back of the yard. She wants to put a circular fence around it. The fence will be 2 meters from the pool.



The radius of the pool is 150 inches

NOTE:
1 m^3 = 1000 ℓ
1 inch = 2,54 cm

You may use the following formulae:

- **Volume sylinder= $\pi r^2 h$**

- **Area of a circular pool = $\pi \times (radius)^2$**
- **Circumference of the fence = 2 × π × radius**
- **Surface area of an open cylinder = π × radius × (radius + 2 × depth)**

- **Where π = 3,142**

NOTE:
Tiles = 0,2 m × 0,2 m (16 in a box)

3.1.1 Define the term radius according to the context. (2)

3.1.2 Convert the radius of the pool to meters. (3)

3.1.3 Calculate to the nearest thousand square inches the area of the swimming pool. (3)

3.1.4 The capacity of the pool is 35 000 liters. Calculate to the nearest meter the depth of the pool (7)

3.1.5 To clean the pool, she uses HTH chlorine powder. HTH is sold in 8kg buckets. She uses 128g of chemicals per 10 000 liters of water per day.

Verify, showing all calculations, whether the 8kg bucket in March will be enough for cleaning the pool. (5)

3.1.6 The total inner surface of the cylindrical pool will be tiled. The tiler states that he requires more than 1 738 tiles to complete the tiling. Verify, showing ALL calculations, whether his statement is valid

(7)
[27]

TOTAL MARKS: 60

ANNEXURE A

vodacom

L9243867-2
OLIVER MICHAELS
407 MONTFRERE
1 CLAIR STREET
WESTDENE
BLOEMFONTEIN
65233

Tax invoice

Account number: L9243867-2
Date: 03/07/2019
Your VAT registration number:

All data Contract customers on any data bundle will qualify for additional data to be used between midnight and 5am, e.g. if you have a MyMeg 250, you will get another 250MB of Night Owl. This offer excludes Top Up and Prepaid customers. T&Cs apply.

Account summary:

Date	Description	Item number	Reference	Amount	Total
04/06/2019	Balance Brought Forward			99.00	99.00
02/07/2019	Payment	SCZ1399863	159019663	-99.00	0.00
03/07/2019	Invoice	B227108833	726371238	99.00	99.00

Invoice summary:

Cellular number: 0731456720
Invoice number: B227108838
Due date: 31/07/2019

Description		Amount	VAT	Total
Subscription Services				
Data Promotion - Top Lip MyGig1	July			99.00
HSDPA Voice Tariff	July	0.00	0.00	0.00
VAS - Balance Notification	July	5.70	0.86	6.56
VAS - Free Balance Notification	July	-5.70	-0.86	-6.56
Total Subscription Services				**99.00**
Subtotal				**99.00**
This invoice amount				**99.00**

> > > 9 2060 1903 149 721 9

Invoice Total **99.00**

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Your bank account will be debited with the full outstanding balance as reflected on this statement on the 1 August 2019.
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