LIMPOPO

PROVINCIAL GOVERNMENT

REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF

EDUCATION

CAPRICORN SOUTH DISTRICT

MATHEMATICAL LITERACY

GRADE 11

INVESTIGATION

DUE DATE: 14 February 2024

DURATION: 2 Hours

MARKS: 57

This question paper consists of 08 pages including the cover page and two answer sheets.

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INSTRUCTIONS AND INFORMATION:

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

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QUESTION 1

Mr Mackson has a building contract to build houses for people. He hires builders and Labors according to the number of houses he must build. He did a survey on the number of people building a house and the time taken to complete a house.

TABLE 1:

No. of builders	1	2	5	8	A	20	24
No. of days taken	240	120	48	30	20	12	B

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Use the information above to answer the questions that follow.

1.1 Determine which variable is dependent and which one is independent. (2)

1.2 Calculate the values of A and B. (2)

1.3 Use TABLE 1 to draw the graph (on answer sheet 1) of Mr. Mackson's survey (Indicate all co-ordinates). (6)

1.4 State the type of proportion represented in the graph. (2)

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QUESTION 2

Tinyiko is selling scones to support her family. She is buying her ingredients from the local shopping mall. It costs her R2,00 to prepare and make one scone and R18 for transport. She sells the scones at R3,00 each.

TABLE 2: COST AND SELLING PRICES OF MAKING SCONES

Number of scones	0	5	15	30	60	90	120	200	250
Cost Price (in Rands)	18	28	48	78	A	198	258	418	518
Selling Price (in Rands)	0	15	45	90	180	B	360	600	750

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Use the information above to answer the questions that follow.

2.1.1 Determine the values of A and B. (4)

2.1.2 Determine the point where the selling price is the same as cost price. (3)

2.1.3 Draw the two graphs on the same set of axes provided. (on answer sheet 2 provided) (6)

2.1.4 If Tinyiko increases the selling price to R3,50, what will happen to the point in Question 2.2. (Show all your calculations). (4)

2.1.5 The selling price is given by the formula Selling Price = R3,00 × K, where K is number of scones. Determine the equation for the cost price. (3)

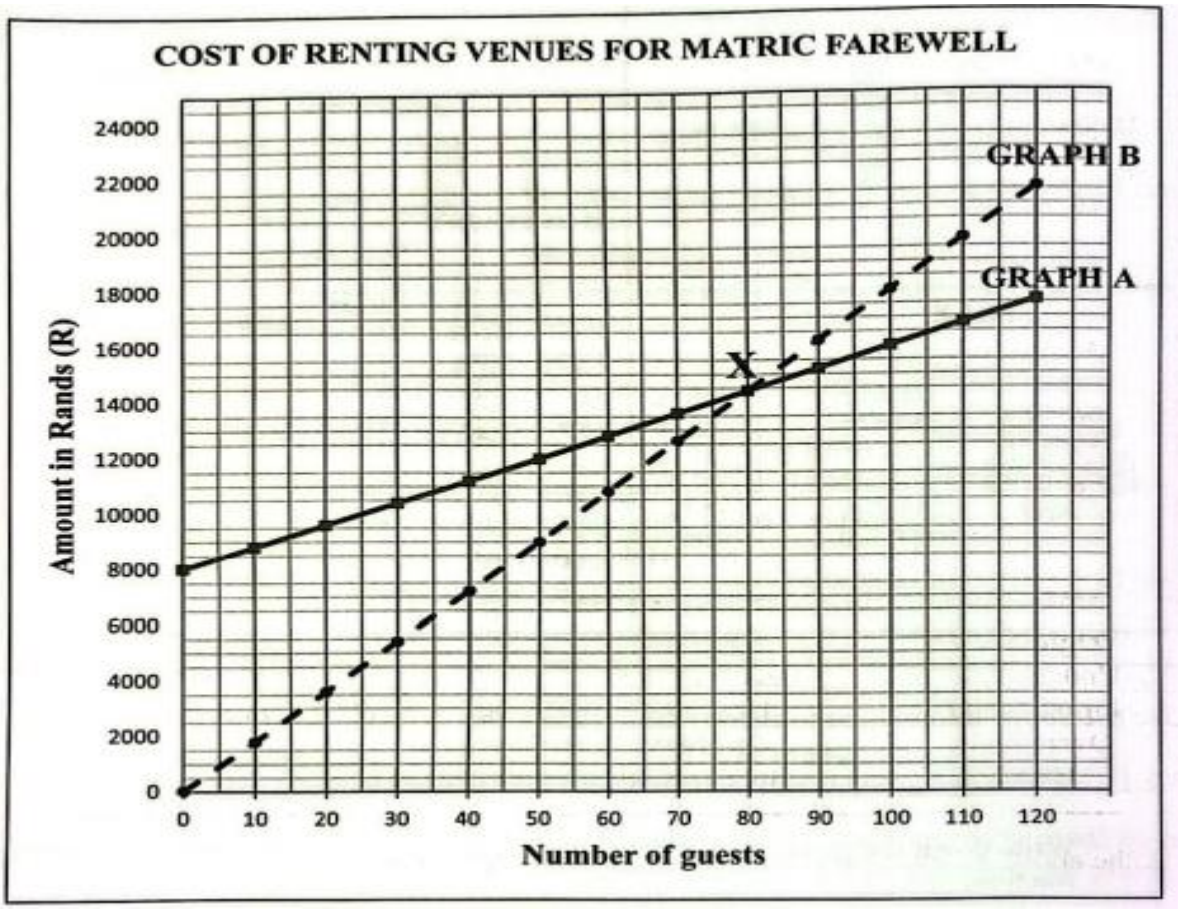
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2.2

Schukina is on the committee that is in charge of planning the matric farewell at her school The committee is considering two different venues for the farewell. The cost of these two venues is given in the graph below.

Venue 1 – Charges a fixed rental fee of R8000 and an additional fee of R80,00 per person

Venue 2 – Charges a rate of R180,00 per person.



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Use the information above to answer the questions that follow.

2.2.1 Name the graph that represents Venue 2. Only write the letter A or B in your answer. (2)

2.2.2 Provide an equation for calculating the cost of Venue 1. (2)

2.2.3 Explain what is happening at the point labelled X on the graph. (2)

2.2.4 The committee eventually opted to go with Venue 2. Schukina said that, with 180 guests attending, they would have paid R10 000 less, had they chosen to go with Venue 1, Verify this statement by showing your calculations. (6)

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QUESTION 3

Most households in communities use pre- paid electricity. When buying electricity, you are given a slip with numbers to enter in your meter box. The slip must have the meter number, amount of money that you buy, VAT amount, the number of KWh for electricity bought, the numbers to enter on the meter box etc.

Use the information above to answer the questions that follow.

3.1 Get an electricity slip and paste it in answer book. (3)

3.2 Write down the amount of money used, VAT amount and number of units bought. (2)

3.3 Show how the VAT amount was calculated. (4)

3.4 In other household's free units are given after buying. Why do other people receive free units (2)

3.5 Other people are saying electricity is cheaper at the beginning of the month. Do you agree/disagree with the statement? (2)

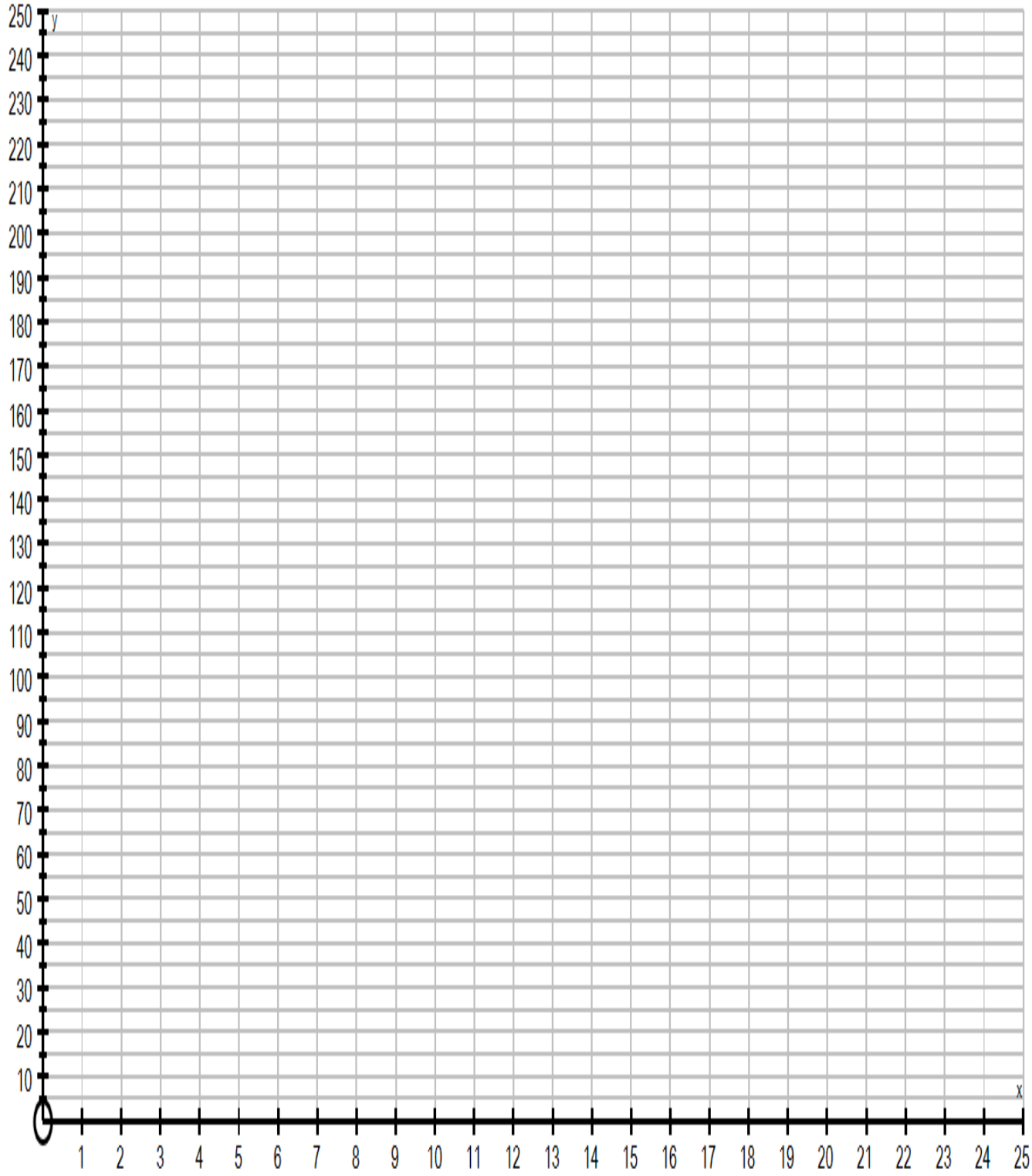
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TOTAL = 57

ANSWER SHEET 1

Question 1.1.3

NAME: ……..



ANSWER SHEET 2
Question 2.1.3

NAME: ……..

