



# **CURRICULUM GRADE 10 – 12**

## **DIRECTORATE**

### **LEARNER SUPPORT DOCUMENT**

**GRADE 11**



### **MATHEMATICAL LITERACY**

**2026**

**This document consists of 80**

This document aims to support learners of Mathematical Literacy in navigating the curriculum effectively. It highlights the challenging topics encountered in the Grade 11 syllabus. The included activities are intended to serve as a framework for assessing the topics addressed within this document. It is anticipated that educators will find this resource beneficial in enhancing learner performance in 2026, thereby gaining valuable insights from its contents. The contributions and collaboration of Provincial Mathematical Literacy Subject Advisors and Lead Teachers during the preparation and production of this document are greatly appreciated and commendable.

**The document will cover the following:**

A	<b>FINANCE</b>	
B	<b>DATA HANDLING</b>	
C	<b>MEASUREMENT</b>	
D	<b>MAPS AND PLANS</b>	
E	<b>PROBABILITY</b>	



**Important Mathematical Literacy Terminologies**

MEASUREMENT	
TERM	MEANING
Area	The amount of two-dimensional space occupied by a 2-D shape. The area of a shape is the size of its surface.
BODMAS	Brackets, of/orders (powers, squares, etc.), division, multiplication, addition, subtraction. A mnemonic (reminder) of the correct order in which to do mathematical operations.
Body mass index (BMI)	A number calculated from an adult's weight and height, expressed in units of $\text{kg/m}^2$
Breadth	How wide something is. From the word "broad".
Capacity	The amount of space available to hold something. OR A measure of the volume a hollow object can hold – usually measured in litres.
Circle	A closed curve that is everywhere the same distance from the middle point.
Circumference	Distance around a circle / the perimeter of a circle.
Conversion	A change from one system / unit to another.
Cubed	The power of three; multiplied by itself three times.
Cubic	Shaped like a cube; having been multiplied by itself three times.
Cylinder	A 3-dimensional object with congruent parallel sides and bases are circles. A tall shape with parallel sides and a circular cross-section – think of a log of wood, for example, or a tube.
Degrees Celsius	Unit used to measure temperature in most countries.
Diameter	A straight line passing through the centre of a circle and touching the circle at both ends, thus dividing the circle into two equal halves.
Dimension	A measurable extent, e.g. length, breadth, height, depth, time. Physics, technical: the base units that make up a quantity, e.g. mass (kg), distance (m), time (s).
Distance	How far it is from one place to another, e.g. from one town to another or from one point to another point.
Growth Charts	Graphs consisting of a series of percentile curves that show the distribution of the growth measurements of children.
Imperial System	A system of measurement using inches, pounds, feet, gallons and miles.
Length	The measurement between two points, in a straight line, e.g. the length of a room.
Measure	Using an instrument to determine size, weight etc.
Measuring	Determine the value of a quantity directly, e.g. reading the length of an object from a ruler or the mass of an object from a scale.
Metric System	A system of measurement that uses metres, litres, kilograms, etc. A measurement system, using a base of 10 (i.e. all the units are divisible by 10).
Perimeter	The total distance around the boundary or edge that outlines a specific shape.
Pi	$\pi$ , the Greek letter p, the ratio of the circumference of a circle to its diameter. A constant without units, value approximately 3,142.
Radius	The distance from the centre of the circle to any point on the circumference of the circle.
Scale	An instrument that is used to measure the weight of an object.
Surface Area	The area of all the faces / surfaces of an object added together.

Volume	The amount of 3-D space occupied by an object. It is measured in cubic units.
Weight	An indication of how heavy an object is.

DATA HANDLING	
TERMS	MEANING
Bar graph	The graphical representation of data that uses bars to compare different categories of data.  90° graph using bars to show frequencies (horizontal and vertical graph), the vertical heights of a set of bars of equal breath represent the values of the dependant variable in a data set.
Biased question	Biased question is the question containing factors that may influence the respondent to answer in a way that is not entirely true.
Box-and-whisker plot	Diagram that statisticians use to show the distribution of data along a number line divided into quartiles.
Broken line graph	A graph that has numbers that alternate going up and down and do not keep to a curved consistent line.
Categorical data	The data that is given in the form of words, names, or labels. It is generally descriptive in nature, as data classified and organized into categories.
Certain	Definitely going to happen e.g. getting heads or tails when tossing a coin is certain.
Class Interval	Data that is divided into a smaller number of categories
Classify	Identify the type or class.
Compound bar graph	(Also referred as vertical stack graph or component bar chart) display two or more sets of data. However, it shows a part/whole relationship so you can easily see what amount each data group makes up of the whole.
Compound events	Two or more events that happen, e.g. tossing a coin and rolling a dice.
Contingency table	A two-way table representing the outcomes of an event.
Continuous data	The data that that is given as numbers including the decimal numbers and/or fractions. Numerical data (measurements like weight or age).
Data	Information, series of observations, measurements, facts; collection and recording of information for statistical investigation. It is raw information that has been collected, without any organization or analysis.
Data collection sheet	Two-column table showing what is observed and how many times it was observed; items of information.
Data handling	Data handling refers to the process of collecting, organizing, summarizing, representing, and analyzing information.
Discrete	Separate; distinct; opposite of continuous.
Discrete data	Numerical data (fixed numbers like size of family). Data that can have only certain values (quantities that can be counted, usually whole numbers).
Double bar graph	The most common multiple bar graph that compares two sets of data.
Equivalent	Quantities that have the same value.
Estimate	Roughly work out; roughly calculate.
Even	Chances of any outcome happening are equal; if a normal six-sided dice is rolled, the chance that any one of the numbers 1,2,3,4,5 or 6 could show is the same.
Event	An activity e.g., rolling a single dice.
Fifty-fifty (even) outcome	Chances of something happening or not happening are the same.
Frequency (f)	Number of times a data value is recorded.

Frequency table	Table showing frequencies in organised form. Table summarising the frequencies of all the data values in a data set.
Group	Put into classes, sort, arrange, organise.
Grouped data	The data given in the form of intervals.
Histogram	90° graph using adjacent bars to show frequencies of continuous numerical data with many different values. Areas of rectangles (continues; no gaps between them) show frequency of classes of data. The graphical representation of continuous numerical data by way of bars to display the frequency of the items in the data set.
Horizontal bar graph	90° bar graph using horizontal bars to compare or rank items like household sizes in a block of flats.
Impossible outcome	No chance of the outcome happening e.g. getting a 7 with an ordinary six-sided dice.
Interview	Record data by talking to someone face to face or over the telephone.
Inter-quartile range	The difference between quartile 3 and quartile 1 OR The difference between largest quartile and the smallest quartile.
Investigate	Examine; look into; study.
Likely/likelihood	Chance of something happening is greater than the chance of it not happening.
Line graph	A graph that uses line segments to connect data points and shows changes in data over time.
Maximum value	The highest or biggest value in the data set.
Mean	Average of the values in a data set; sum of all the observed values divided by the number of observations.
Mean [of a set of data]	Average: sum of all data values divided by the number of data values.
Measures of central tendency	Numbers that tell more about the balance (middle values) in a data set (mode; median; mean).
Measures of spread	Numbers that tell how far data values in a data set lie apart; spread of numerical data set (range, quartiles, and percentiles).
Median	Middle value in an ordered data set.
Median [of a set of data]	Value that cuts an ordered data set in half.
Methods of collecting data	Methods of collecting data is interview, observation and research or survey.
Minimum value	The lowest or smallest value in the data set.
Mode	Value or values appearing most often in a data set.
Mode of a set of data	Most common data value in a data set.
Multiple bar graph	A bar graph that displays two or more sets of data at once for easy comparison
Notation	System of figures/symbols to represent numbers, quantities or values.
Numerical data	The data that is given in the form of numbers.

Observation	Recording of data by watching someone or something closely. OR The method of collecting data that involves watching, listening, touching, reading.
Outcome	Result of a trial (experiment).
Outcome [fair]	All outcomes are equally likely to occur.
Outliers	Data value that lies an abnormal distance from the other data values in the data set. OR Extreme low or extremely high value in the data set. OR The item or value in the data set that differs significantly with other items or values.
Percentiles	The points that divide the data set into 100 equal parts.  Quartile 1 is the 25 <sup>th</sup> percentile i.e., the value at which 75% of the data set lies above and 25% of the data set lies below it.  Quartile 2 Is the 50 <sup>th</sup> percentile i.e., the value at which 50% of the data set lies above and 50% of the data set lies below it.  Quartile 3 is the 75 <sup>th</sup> percentile i.e., the value at which 25% of the data set lies above and 75% of the data set lies below it.
Pie Chart	A circular diagram that is divided up into different sections or sectors.  A circle divided into sections illustrating the size for each category.
Population	Entire source of data involved in an investigation; all the subjects included in a study or survey in order to draw conclusions about that population as a whole.
Possible outcome	The chance that the event will happen or occur.
Prediction	Statement describing the chance of an outcome to happen based on given information.
Probability [mathematical]	Results of trial or experiment expressed as a fraction: number of favourable outcomes divided by number of all possible outcomes.
Probability [of an outcome]	Likelihood of a particular outcome occurring, expressed as a number between zero and one.
Qualitative data/ Categorical data	Data that relates to certain categories e.g male/female or type of car e.t.c
Quantitative data/ Numerical data	Data that can be measured and can be discrete or continuous.
Quartiles	The values that divide a list of numbers into four equal parts.
Questionnaire	List of questions that can be used to collect data.  An instrument consisting of questions for the purpose of collecting data.
Random sampling	The sampling method that allows every member of the population a chance of being included in the sample.
Range [of a data set]	Difference between the highest and lowest values in a data set. OR The difference between the maximum value and the minimum value in the data set.
Related [data sets]	Linked; connected.

Represent [data]	Draw, graph.
Representative sample	Sample likely to give results similar to those obtained from studying the whole population.
Sample	Subset (small group) chosen from the population to represent the population. OR The fraction of the entire group to be used in the collection of data
Sampling	Choosing a representative sample.
Scatter plot	A graph that is made by plotting ordered pairs in a coordinate plane to show the relationship between two sets of data, but the points are not connected by a line.
Sort	Put, organise into categories.
Stacked bar graph	(Also known as stacked bar charts) Instead of displaying a compound bar graph with bars side-by-side a stack bar graph divides the bar into segments. It is used to show how one bar is divided into smaller parts
Survey	Collect data from a group of people or objects.
Survey [biased]	Survey containing factors that produce answers that do not represent a truthful picture of the situation.
Tree diagram	Diagram using branches to display all the outcomes of a series of trials.
Trend	An upward or downward shift in the data set over time.
Two-way table	A contingency table representing all possible outcomes of two trials taking place together.
Ungrouped data	The data given as individual items or values.
Unlikely	Chance of something happening is less than the chance of it not happening.
Variable	A quantity that can take different values in a situation.
Vertical bar graph	90° bar graph using vertical bars to show change over time at discrete times like absentees per day for three weeks.
Very likely	Chance of something happening is much greater than chance of it not happening.
Very unlikely	Chance of something not happening is much greater than the chance of it happening.

<b>FINANCE</b>	
<b>TERM</b>	<b>MEANING</b>
Account	A record of income and expenditure.
Balance	This is the difference between debits and credits.
Bank statement	The details of all the transactions made from one bank account in a given time period.
Break-even point	Break-even point is where the business is at an activity level (doing business) at which total cost = total sales, i.e. you have made enough income to cover the costs. At the break-even point, you are making neither a profit nor a loss; from that point on you will be making a profit with each sale (until new costs are incurred).
Budget	A plan of how to spend money. An estimate of income and expenditure.

Bursary	A sum of money given to you by an organisation to cover the cost of your formal studies.
Capital	Money that is owned by someone and used for the purpose of investing or lending.
Commission	The sum of money paid to an agent (usually a salesperson) that is a percentage of the total value of goods sold by the agent.
Compound interest	Interest charged on an amount due, but including interest charges to date.
Consumption rate	The rate at which a commodity, such as water, electricity or fuel, is consumed.
Cost-effective	Best value for money.
Cost price	This is the amount that it costs per unit to either manufacture or purchase an item or to prepare for a service that will be delivered. This amount is pure cost, no mark-up or profit has been added yet.
Cost rate	The price of a product per mass, volume, length or time unit.
Credit	This is an entry in an account that shows a payment made into the account.
Credit balance	The amount in the account is your own.
Credit card	A credit card is a service bank product that allows you to buy goods and pay for them at the end of the month.
Credit limit	The maximum amount you can spend on your credit card.
Debit	When someone or an organisation takes money out of your account. An entry in an account showing a payment made from an account.
Debit balance	The amount owed to a lender or seller.
Debit order	It is an arrangement whereby you give permission to a third party to withdraw money from bank account on a regular basis.
Deposit	A payment made into a bank account.
Disposable income	Income that is left over after all payments have been made.
Exchange rate	The value of one currency relative to the value of another currency.
Expenditure	An amount of money that is spent on something.
Fine print	The legal terms and conditions printed on a contract applicable to a transaction or account.
Fixed deposit	A single deposit invested for a fixed period at a fixed interest rate.
Fixed expenses	These are amounts that must be paid every month and which stay the same, like rent, school fees and transport costs.
Fund	A source of money.
Gross income	The total amount of all an individual's income before deductions.
Hire purchase	Goods and products such as furniture can be purchased using a longer term lease or hire agreement (hire purchase); insurance is usually also added to the amount payable until it is paid off.
Inflation	An increase in the price of a basket of goods or services that is representative of the economy as a whole.
Interest	Money paid regularly at a particular rate for the use or loan of money. It can be paid to you by a finance organisation or bank (in case of savings); or it may be payable by you to a finance organisation on money you borrowed from the organisation.
Interest rate value	This is the % rate of interest that will be charged on your loan amount, i.e. a percentage value of the original loan amount.
Interest value	This is the actual rand amount of interest that will be added to your loan.
Investment	To put money into an organisation or bank (e.g. by buying shares), so as to gain interest on the amount at a higher rate.
Investment	Something in which you have invested money.

Invoice	A comprehensive document that details all the work done or items sold, and what costs are due.
Lay-by	It is a form of credit where the buyer pays a deposit and pays the balance in instalments while the shop keeps the item(s) until it has been paid off.
Loan	A loan is an agreed sum of money that is lent by a bank or moneylender (e.g. personal loan or home loan).
Luxury item or service	An item or service that is not essential for daily life, but which makes life easier or more convenient.
Net pay	The amount an employee “takes home” after income tax has been deducted.
Overdraft	An overdraft is an arrangement you make with the bank that allows you to draw more money than there is in your account.
PAYE	(abbr.) Pay as you earn: tax taken off your earnings by your employer and sent to the South African Revenue Service before you are paid (the balance).
Remittance slip	A piece of paper that accompanies a payment and contains the most important details of the transaction.
Salary	An amount of money paid for the work you do. (This is normally paid monthly.)
Selling price	This is the price at which something is offered for sale.
Simple interest	Interest charged on the original amount due only, resulting in the same fee every time.
Statement	A summary of transactions (debits and credits, or payments and receipts) made on an account.
Tariff	The rate charged for a service rendered, e.g. import duties, water consumption cost, etc.
Tax	A compulsory levy imposed on citizen’s earnings or purchases to fund the activities of government.
Taxable	A service, purchase or item or earning that has tax applied to it.
Tax invoice	Printed record of what was bought, what it cost, what was taxable, the tax amount, method of payment, amount tendered, and change due, if any.
Trillion	One-million-million (one followed by twelve zeros).
UIF	(abbr.) Unemployment Insurance Fund: A government-run insurance fund which employers and employees contribute to, so that when employees are retrenched they can collect some earnings (a portion).
Variable expenses	Expenses that change over time or from one week/month to the next. These are things that you usually pay or buy each month, but the amount changes e.g. telephone and electricity costs.
VAT	Value Added Tax (VAT) is a tax that is levied at 14% (currently in South Africa) on most goods and services, as well as on the importation of goods and services into South Africa.
VAT exclusive price	The price before VAT is added.
VAT inclusive price	The price after VAT is added.
Wages	A wage is an amount of money paid to an employee normally based on a fixed number of hours worked per week.
Withdrawal	Money taken out of a bank account.
Zero rated VAT items	These are goods that are exempt from VAT. Groceries that are basic foodstuffs are zero-rated in South Africa, e.g. brown bread, milk, mielie meal, samp, rice, etc..


**MAPS AND PLANS AND REPRESENTATION OF THE PHYSICAL WORLD**

TERM	MEANING
2-D models	A diagram or picture having length and width only.
2-dimensional plans	A plan or design having length and width only, but possibly representing three dimensional objects.
3-D models	A dimensional construction of real-life objects.

Bar scales	Presented as a picture, it means that if you placed a ruler next to this scale, you could determine how many centimeters next to this scale, you could determine how many centimeters represent the specified kilometers
Compound bar graphs	Graphs that contain multiple bars for each category of data, with each bar representing a different component of each category of the data.
Elevation map	Information about the profile of a route as seen from the side.
Elevation plans	Show the design and dimensions of the outside of a building from a side view.
Floor plan	Shows the design and dimensions of the inside of a building, from a top view.
Highway	A major road that links major cities.
Line graphs	A diagram used to display data with a consistent trend.
Location:	A particular place or position.
Map:	A symbolic representation of selected characteristics of a place drawn on a flat surface.
Model:	A thing used as an example to follow and imitate an object (a three dimensional figure or object)
National road map	Shows major roads linking major cities to each other.
North elevation plan	Shows the side of the building that is in front of you when you are facing the compass direction 'North'
Number scale	A number scale such as 1 : 50 000 means that 1 unit on the map represent 50 000 units in real life
Scale	Determines how many times smaller an object shown on a plan or map is that its actual size
Scale drawing	A diagram of a real-life object drawn in proportion.
Scaled elevation plans	Show the design and dimensions of the outside of a building from a side view using a specific scale.
Map:	A symbolic representation of selected characteristics of a place drawn on a flat surface.
Street map	A map of a small area such as a town or city.
Strip map	A map of a section of a travelling route.
Route map	Shows a specific route, for instance for an event, as seen from above.
Question word	What is required of you
Analyse	Separate, examine and interpret
Calculate	This means a numerical answer is required – in general, you should show your working, especially where two or more steps are involved
Classify	Group things based on common characteristics
Compare	Point out or show both similarities and differences between things, concepts or phenomena
Define	Give a clear meaning

describe	State in words (using diagrams where appropriate) the main points of a structure/process/phenomenon/ investigation
determine	To calculate something, or to discover the answer by examining evidence
differentiate	Use differences to qualify categories
discuss	Consider all information and reach a conclusion
explain	Make clear; interpret and spell out
identify	Name the essential characteristics PAY SPECIAL ATTENTION
Label	Identify on a diagram or drawing
List	Write a list of items, with no additional detail
Mention	Refer to relevant points
Name	Give the name (proper noun) of something
State	Write down information without discussion
Suggest	Offer an explanation or a solution
tabulate	Draw a table and indicate the answers as direct pairs

PROBABILITY	
TERM	MEANING
Event	An event is something that may or may not happen when an action is performed.
Outcome	This is the result of an event.
Probability	The likelihood of something happening or not happening.
Experiment	Is a series of trials performed one after another.
Trial	Is an action which may lead to a result.
Possible outcome	is any of the possible results of a trial.
Favourable outcome	is any of the possible outcomes which favour a specific event.
Actual outcome	is the actual result of a single trial.
Frequency	The number of times that something happens.
Expected frequency of an outcome	is the number of times one expects the outcome to occur during an experiment.
Actual frequency of an outcome	is the number of times the outcome actually occurs during an experiment.
Frequency of an event	Is the number of times that the event occurs during an experiment (a set of trials)
Relative frequency (experimental probability) of an event	is the number of times outcomes occur divided by the total number of trials. i.e.
	$\text{Experimental Probability} = \frac{\text{number of times the outcome did occur}}{\text{total number of trials (outcomes)}}$

 <p>Theoretical probability</p>	<p>is worked out as number of possible successful outcomes divided by total number of outcomes.i.e.</p>
	$Probability = \frac{\text{number of successful outcomes}}{\text{total number of possible outcomes}}$
<p>Sample Space</p>	<p>All the possible outcomes of an experiment.</p>
<p>Sample Point</p>	<p>Just one of the possible outcomes</p>
<p>Random</p>	<p>When something happens without being made to happen on purpose.</p>
<p>Fair</p>	<p>Treated equally, without having an advantage or disadvantage.</p>
<p>A fair game</p>	<p>Is a game in which there is an equal chance of winning or losing.</p>
<p>A fair coin</p>	<p>is a coin that has equal probability of falling on a “head” or a “tail” when it is tossed.</p>
<p>Descriptions of the likelihood of an event occurring:</p>	
<ul style="list-style-type: none"> <li>• Impossible</li> <li>• Unlikely</li> <li>• Even (equally likely)</li> <li>• Likely</li> <li>• Certain</li> </ul>	<ul style="list-style-type: none"> <li>– it has no chance of happening</li> <li>– it has a greater chance of not happening than of happening – it has as much chance of happening as of not happening.</li> <li>– It is equally likely to happen as to not happen.</li> <li>– it has a greater chance of happening.</li> <li>– it is certain that it will happen.</li> </ul>
<p>Compound events</p>	<p>are two or more events happening at once.</p>
<p>Independent events</p>	<p>are events such that the probability of one event occurring in no way affects the probability of the other event occurring.</p>
<p>Dependent events</p>	<p>Events are dependent if the occurrence of either event affects the probability of the other.</p>
<p>Mutually Exclusive</p>	<p>means we can't get both events at the same time. (It is either one or the other, but not both)</p>

PAPER 1	PAPER 2
<p>Finance 60% (<math>\pm 5</math>)                      Data Handling 35% (<math>\pm 5</math>)                      Probability 5%                      Including Growth Charts (CAPS page 65) assesses application of measures of spread in data handling.</p>	<p>'Maps, plans and other representation of the physical world 40% (<math>\pm 5</math>) Measurement 55% (<math>\pm 5</math>)                      Probability 5%                      Including <math>\pm 5\%</math> (Income, Expenditure, Profit/loss, Income-and-Expenditure statements and Budgets, Cost price and Selling price) where there is direct link to Measurement and Maps and Plans.</p>
<p>Question 1:30 marks <math>\pm 5</math> marks                      Level 1 questions from Finance and Data Handling                      Question 2                      Finance                      Question 3                      Data Handling                      Question 4                      Integrated context on Finance and Data Handling                      Including Growth Charts (CAPS page 65) assesses application of measures of spread in data handling.</p> <p>Question 5                      Finance, data handling or integrated question                      Data handling will be examined in the context of one or more of the other questions.                      Each question can contain more than one context.</p>	<p>Question 1:30 marks <math>\pm 5</math> marks                      Level 1 questions from Measurement and Maps, plans                      Question 2                      'Maps and plans Question 3                      Measurement                      Question 4                      Integrated context on 'Measurement and Maps and plans                      Including (Income, Expenditure, Profit/loss, Income-and-Expenditure statements and Budgets, Cost price and Selling price) where there is direct link to Measurement and Maps and Plans. Question 5                      Measurement, maps and plans or integration                      Data handling will be examined in the context of one or more of the other questions. Each question can contain more than one context.</p>
<p>N. B: EACH PAPER MAY HAVE 4 OR 5 QUESTIONS</p>	



QUESTION 1

1.1 TABLE 1 below shows exchange rates for the South African Rand (ZAR) against three currencies.

TABLE 1 showing the exchange rates of 1 unit of foreign currency to the South African Rand

Currency	Code	Exchange Rate (1 Unit of foreign currency to ZAR)
US Dollar	USD	R18.50
Euro	EUR	R20.20
British Pound	GBP	R23.80

Use the information and the table above to answer the questions that follow.

1.1.1 Calculate how many Rand(s) will you need to buy 50 US Dollars. (2)

1.1.2 Calculate how many Euros can be bought with R 5 050,00. (2)

1.1.3 State the currency which is the strongest compared to the South African rand. (3)  
Explain your answer.

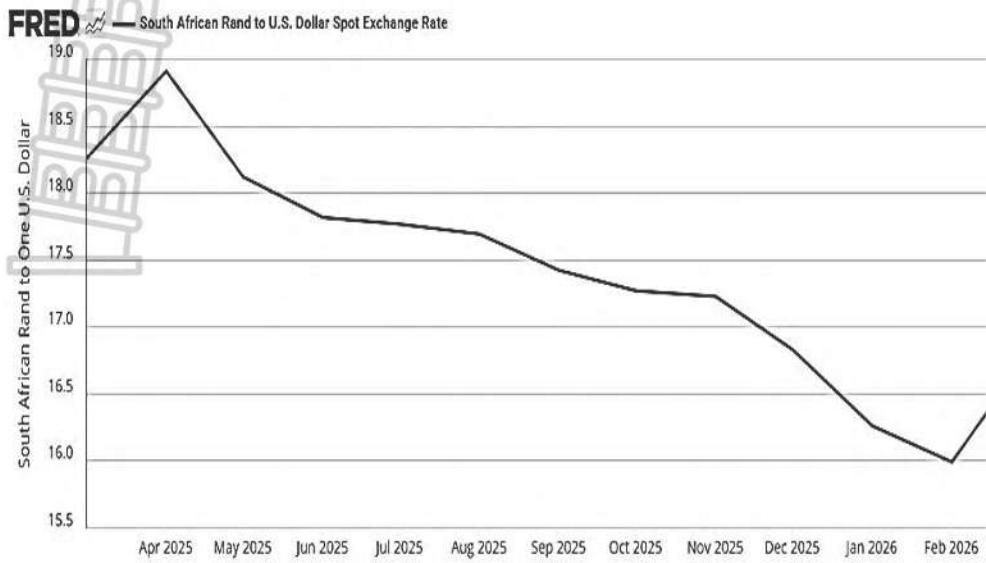


1.1.4 Write the exchange rate of the South African Rand (ZAR) to the British pound (GBP) in the unit form **1: ...**

Round off your answer to 5 decimal places. (3)

1.1.5 Write down the probability as a decimal of randomly selecting the Botswana Pula (BWP) from TABLE 1 above. (2)

1.2 Below is a graph showing the South African Rand to the US Dollar exchange rate over an 11-month period.



Use the information above to answer the questions that follow.

1.2.1 Determine the exchange rate for the month of January 2026. (2)

1.2.2 A fellow classmate claims that the rand was at its strongest in the month of April 2025, verify by referring to the graph above if his claim is correct. (3)

1.2.3 James went on a two-week holiday in the United States of America, during the month of February 2026. He budgeted R40 000 for his return flights and R35 000 for his travel and accommodation costs. The travel agent indicated that the total cost in US dollars amounts to \$7 500. Show by calculations if James budgeted sufficiently for his two-week holiday. (5)

1.2.4 State the month where the buying power of the US dollar was at its weakest against the South African rand. (2)

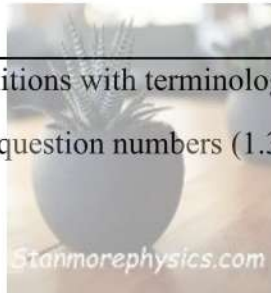
**TABLE 2: DEFINITIONS OF TERMINOLOGY USED IN  
MATHEMATICAL LITERACY**

<b>A</b>	A financial record that keeps track of money received, money spent, or money owed.
<b>B</b>	An amount that changes each month by a fixed value.
<b>C</b>	Is calculated as 1% of an employee's gross earnings and paid towards a fund for the benefit of the employee.
<b>D</b>	Is when the business makes a profit
<b>E</b>	Is calculated as 1% of an employer's gross earnings and paid towards a fund for the benefit of the employee.
<b>F</b>	A positive balance in a personal budget.
<b>G</b>	Rental expense for a small business.
<b>H</b>	Appears at the bottom of a financial document indicating the amount that is payable by the recipient

Use TABLE 2 above and match the definitions with terminology below.

Write only the letter (A to H) next to the question numbers (1.3.1 to 1.3.5).

e.g., 1.3.6 H.



1.3.1 UIF (2)

1.3.2 Budget surplus (2)

1.3.3 Fixed expense (2)

1.3.4 Total Due (2)

1.3.5 Account (2)

1.4 Below is the Income and Expenditure statement of DHZ holdings for the month of March 2026.



Date: March 2026

**INCOME AND EXPENDITURE STATEMENT**

**DHZ HOLDINGS**

INCOME		EXPENDITURE	
Sales Revenue	R 15,000	Rent:	R 6,000
Service Fees:	R 5,500	Supplies:	R 3,200
Interest Income from Investment	R 3,000	Wages:	R 8,000
Other Income:	R 1,200	Utilities:	R 1,500
		Fibre:	R 800
		Insurance:	R 500
		Marketing:	R 1,000
		Business Loan:	R 1,500
		Donations:	R 500
<b>Total Income:</b>	<b>R 24,700</b>	<b>Total Expenditure:</b>	<b>R 23,000</b>
<b>Net Profit:</b>			<b>R 1,700</b>

Use the information above to answer the questions that follow.



1.4.1 State the month and year of the Income and Expenditure statement for DHZ holdings. (2)

1.4.2 Calculate the probability, as a decimal fraction, of selecting Service Fees or Other income as sources of income. (3)

1.4.3 List three fixed expenses. (3)

1.4.4 Write the probability in words of randomly selecting two variable expenses from the list of expenses. (2)

1.4.5 Write the Total income, as a simplified ratio, of the Total expenditure. (3)

1.4.6 Suggest two ways that the business can increase its profits in the future. (4)

**QUESTION 2**

2.1 The table 3 below shows a payslip for Lerato, who works at a clothing store.

**Table 3: Lerato's Monthly Payslip**

PAYSLIP			
NAME: L Malay			Date: February 2026
Income	Amount (R)	Deductions	Amount
Basic Salary	R9 200	UIF Deduction (1%)	<b>A</b>
Overtime Pay	R800	PAYE (Tax)	R900
Commission	R1 200		
<b>Gross Salary</b>	R11 200	<b>Total Deductions</b>	<b>B</b>
<b>Net Salary</b>	<b>C</b>		

source: www.google.com/pay\_slip

**Note:** UIF is calculated as **1% of the gross salary**. The employer also contributes **1%**, but this is not deducted from the employee's salary.

Use the information from the table above to answer the questions that follow.

2.1.1 Calculate the values of **A**, **B** and **C** respectively. (6)

2.1.2 Calculate in Rands, the amount that the employer will contribute to Lerato's UIF over the next six months, provided that her earnings remain the same. (2)

2.1.3 Determine the total amount paid into UIF for the month of February 2026. (2)

2.1.4 If Lerato works for 12 months at the same salary, calculate the total UIF contributions made by the employee and employer. (2)

2.1.5 Explain why UIF is deducted from employees' salaries. (2)

2.1.6 State one situation where Lerato could be legible to claim from her UIF. (2)

2.2 Below is a Bank statement for Mr. Dlamini for the month of January 2026.

<b>UMLAZI FIRST BANK</b>					
245 Main Street, Umlazi, KZN, 4066 Tel: 031 123 4567					
<b>STATEMENT OF ACCOUNT</b>					
For: <b>JANUARY 2026</b>					
Account Holder: Siphso Dlamini					
Account Number: 123 456 789					
Branch Code: 220123					
DATE	DESCRIPTION	DEBITS	CREDITS	BALANCE	
01/01/2026	Opening Balance			R 15,000.00	
02/01/2026	ATM Withdrawal	R 2,000.00		R 13,000.00	
04/01/2026	Grocery Store	R 850.00		R 12,150.00	
06/01/2026	Salary Deposit		R 10,000.00	R 22,150.00	
08/01/2026	Electricity Bill	R 1,200.00		R 20,950.00	
10/01/2026	Transfer from Savings		R 3,000.00	R 23,950.00	
12/01/2026	Car Payment	R 3,500.00		R 20,450.00	
15/01/2026	EFT Payment	R 600.00		R 19,850.00	
18/01/2026	Interest Credit		R 250.00	R 20,100.00	
22/01/2026	Online Shopping	R 750.00		R 19,350.00	
25/01/2026	Refund Credit		R 1,200.00	R 20,550.00	
28/01/2026	Bonus Deposit	R 5,000.00		R 25,550.00	
<b>Total Debits: R 8,900.00</b>		<b>Total Credits: R 19,450.00</b>			
<b>Ending Balance: R 25,550.00</b>					

Use the information above to answer the questions that follow.

2.2.1 Write down the month and year of the Bank statement. (2)



2.2.2 Define *Opening Balance* in the above context. (2)

2.2.3 Calculate the values of **A** and **B** respectively. (4)

2.3 Below is a tax invoice supplied to a client of Rietvlei Supplies.

### INVOICE

Date: 15 January 2026

Invoice #: RVL2026-001

Seller:  
Rietvlei Supplies  
123 Main Street,  
Rietvlei, 0129

DESCRIPTION	AMOUNT (EXCL. VAT)	VAT (15%)	AMOUNT (INCL. VAT)
Printer	R 1,500.00	R 225.00	R 1,725.00
Notebook	<b>D</b> <b>A</b>	R 180.00	R 1,870.00
Flash Drive	R 560.00	R 84.00	R 990.00
Paper Ream	R 800.00	R 120.00	R 920.00
Calculator	R 565.00	R 84.75	R 847.50
Stapler	R 900.00	R 135.00	<b>B</b>
Scissors	R 75.00	R 75.00	R 150.00
Printer Ink	Subtotal (Excl. VA		<b>C</b> R 3,785.00
	Total VAT:		<b>E</b> R 855.00
	Grand Total (Incl. VAT		<b>F</b> R 4,615.00

Use the information above to answer the questions that follow.

2.3.1 Write down the reference number of the financial document. (2)

2.3.2 Calculate the values of A, B, C, D, E and F (6)

2.3.3 Write down the probability, as a percentage, of **NOT** finding an item that costs less than R1 000. (3)

2.3.4 Show that the VAT inclusive amount for the Paper ream is R920. (2)

2.3.5 A fellow client indicated that the VAT and total including VAT was calculated incorrectly on the invoice. Verify his claim, with calculations. (3)

[40]

**INCOME, EXPENDITURE, PROFIT/LOSS, COST PRICE, SELLING PRICE AND BREAK-EVEN ANALYSIS.**

**QUESTION 3**

3.1 Miss Johnson is working as an experienced accountant in the department of treasury. Her statement from TSD bank is shown below.

<b>Bank statement</b>	<b>From: 01/03/2026</b>
	<b>To: 31/03/2026</b>
<b>TRANSACT SAVINGS ACCOUNT</b>	<b>Account number: 1108 76 .....</b>

Date	Description	Debit (R)	Credit (R)	Balance (R)
01/03/26	Balance brought forward			127 400. 27
01/03/26	Debit card purchase: Groceries	560, 42		126 839, 85
05/03/26	Debit order: Vehicle finance	6 999. 00		119 840. 85
05/03/26	Debit order: Vehicle insurance	1 659, 25		118 181, 60
15/03/26	Branch cash deposit		<b>A</b>	122 681, 60
16/03/26	ATM Cash withdrawal	750, 00		121 931, 60

21/03/26	Debit card purchase: Hardware store	3 399,30		118 532, 30
21/03/26	Debit card purchase: Tasty restaurant	537, 90		117 994, 40
25/03/26	ATM Cash withdrawal	500, 00		117 494, 40
25/03/26	Debit order: Home loan	11 782, 81		105 711, 59
30/03/26	ATM Cash withdrawal	500, 00		105 211, 59
31/03/26	Total Banking service fees for March	137, 50		105 074, 09
31/03/26	Salary Deposit		43 784, 25	148 858, 34

**TABLE 1: Monthly banking service fees for the transact account of TSD Bank**

CASH DEPOSITS	CASH WITHDRAWALS	PAYMENTS
<b>At the Branch:</b> R11 + 1,35% of the amount deposited	<b>In the Branch:</b> R33 + 1,1% of the amount withdrawn	<b>Debit card Purchase:</b> Free
<b>At Bank's ATM:</b> R10,70 + 1,2% of the amount deposited	<b>At Bank's ATM:</b> R3,50 + 1,1% of the amount withdrawn	<b>Debit order:</b> R12 Per debit order

Use the information and tables above to answer the questions that follow.

- 3.1.1 Define *Balance brought forward* in above context. (2)
- 3.1.2 Determine the number of days covered by this statement. (2)
- 3.1.3 Calculate the balance that was in the account on the 28<sup>th</sup> February 2026. (2)
- 3.1.4 Determine the total number of transactions made on this statement. (2)


3.1.5 Calculate the value of **A**, the balance on the 15<sup>th</sup> of March 2026. (2)

3.1.6 Determine the probability, as a decimal fraction to three decimal places, of randomly selecting a debit less than R1 000, 00. (3)

3.1.7 Miss Johnson is concerned that she is paying too much in banking service fees. Verify, showing ALL calculations whether the total banking service fees for March as shown on the statement is CORRECT. (6)

3.1.8 On the 1<sup>st</sup> of April 2026, Miss Johnson made a cash withdrawal in the branch and the bank service fee for that transaction was R165, 00. Calculate the amount of cash withdrawal that she made. (4)

3.2 Aziwe has a home loan of with FIN Bank. She will pay the loan over 20 years. Below are the details of the home loan.

PICTURE OF AZIWE'S HOUSE	DETAILS
	Loan amount: R1 250 000, 00
	Deposit: R250 000, 00
	Monthly bond: R11 782, 81
	Annual Interest rate: 11, 75%
	Period of payment: 20 Years

[Adapted from www.property24.co.za]

Use the information above to answer the questions that follow.

3.2.1 Calculate the monthly interest rate for the home loan from FIN Bank. (2)

3.2.2 Determine the loan amount that Aziwe will pay towards the home loan after paying the deposit. (3)

3.2.3 The amount of R250 000, 00 Aziwe paid to deposit the house was the money she received from her investment. Six months before she decides to buy the house, she Invested an amount of money at an interest rate of 8, 2% per annum compounded quarterly. Calculate the amount that she invested. (4)

3.2.4 Calculate the total cost of the loan Aziwe will pay for the house after 20 years if the interest rate remains the same.

You may use the formula:

$$\text{Total Cost} = \text{Monthly repayment} \times \text{loan term in months} \quad (3)$$

3.2.5 Hence, calculate total interest paid for the home loan.

You may use the formula:

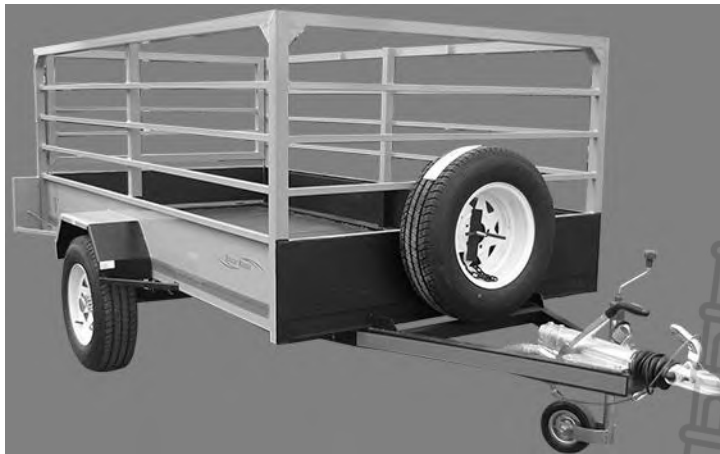
$$\text{Total interest} = \text{total cost} - \text{loan Amount} \quad (2)$$

#### QUESTION 4

4.1

Mzilikazi is the owner of Amazizi Trailer Manufacturing Company he pays an amount of R4 500 for rent including water and electricity per month. It costs him R8 000 to make one trailer. He pays his employee a salary of R5 500 per month. The selling price for each trailer is R10 000.

#### PICTURE OF A MANUFACTURED TRAILER



[Adapted from [www.newmoontrailerspty.co.za](http://www.newmoontrailerspty.co.za)]

TABLE 1 below shows the total cost and total income for trailer manufacturing.

#### 1: TOTAL COST AND INCOME FOR SELLING TRAILERS

Number of Trailers	0	1	3	B	15	20
<b>Total Cost(R)</b>	<b>A</b>	18 000	34 000	74 000	130 000	170 000
<b>Total income (R)</b>	0	10 000	30 000	80 000	150 000	<b>C</b>

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

4.1.1 Calculate the value of **A**, the total fixed cost for Amazizi company. (2)

4.1.2 Write the formulae that can be used by the company to calculate the cost, and income in the form:  
(a) (2)

**Cost = ...**

4.1.2 Write the formulae that can be used by the company to calculate the income in the form:  
(b) **Income = ...** (2)

4.1.3 Hence, calculate the values of **B** and **C**. (4)

4.1.4 Mzilikazi claims that the company needs to manufacture five or more trailers to reach the break even. Verify, using calculations if his claim is CORRECT.

You may use the formula:

$$\text{Number of trailers} = \frac{\text{Total fixed expenses}}{\text{Income per trailer} - \text{Variable cost per trailer}} \quad (4)$$

4.1.5 The graph of income for the company is drawn on the ANSWER SHEET provided. Use the values in TABLE 2 to draw the graph of company's income on the same set of axes. (4)

4.1.6 In November 2025 the company sold 55 trailers to different customers. Calculate the amount of profit the company made.

You may use the formula:

$$\text{Profit} = \text{Income} - \text{Cost} \quad (5)$$

4.2

Thabekhulu, one of AMAZIZI customers, bought trailers to start a trailer rental business to generate income.

Trailer rental prices are given below.

- Utility trailer cost R300, 00 per day or part thereof
- Cattle trailer cost R450, 00 per day or part thereof

**NOTE:** Thabekhulu has 12 utility trailers and 5 cattle trailers.

Use the information above to answer the questions that follow.

4.2.1 Define *Part thereof* in the above context. (2)

4.2.2 Write the ratio, in a simplified form, of the cattle trailer price to the utility trailer price. (2)

4.2.3 On the week of the 23<sup>rd</sup> to the 29<sup>th</sup> of March 2026, Thabekhulu rented out nine utility trailers and seven cattle trailers. Calculate his profit after the expenditure of R850 paid to wages of his employee and R750 paid on maintenance of trailers. (4)

4.2.4 Determine the probability, as a percentage, of randomly selecting a utility trailer from Thabekhulu trailers. (3)

4.3 South African government prepares and presents its budget for income and expenditure every year in parliament. ANNEXURE A shows the budget for 2024/2025 year.

Use the information on ANNEXURE A to answer the questions that follow.

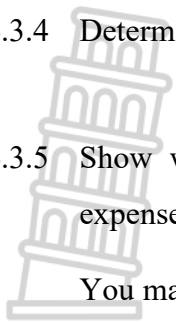
4.3.1 Write the amount received by government from income tax in words. (2)

4.3.2 Express the total income amount for the budget in numerals. (2)

4.3.3 Identify the least source of expenditure from the budget. (2)

4.3.4 Determine how the total expenditure amount of R393, 8 billion was calculated. (3)

4.3.5 Show with calculations, if the government income will be enough to cover all the expenses.



You may use the formula:

$$\text{Surplus/Deficit} = \text{Income} - \text{Expenses}$$

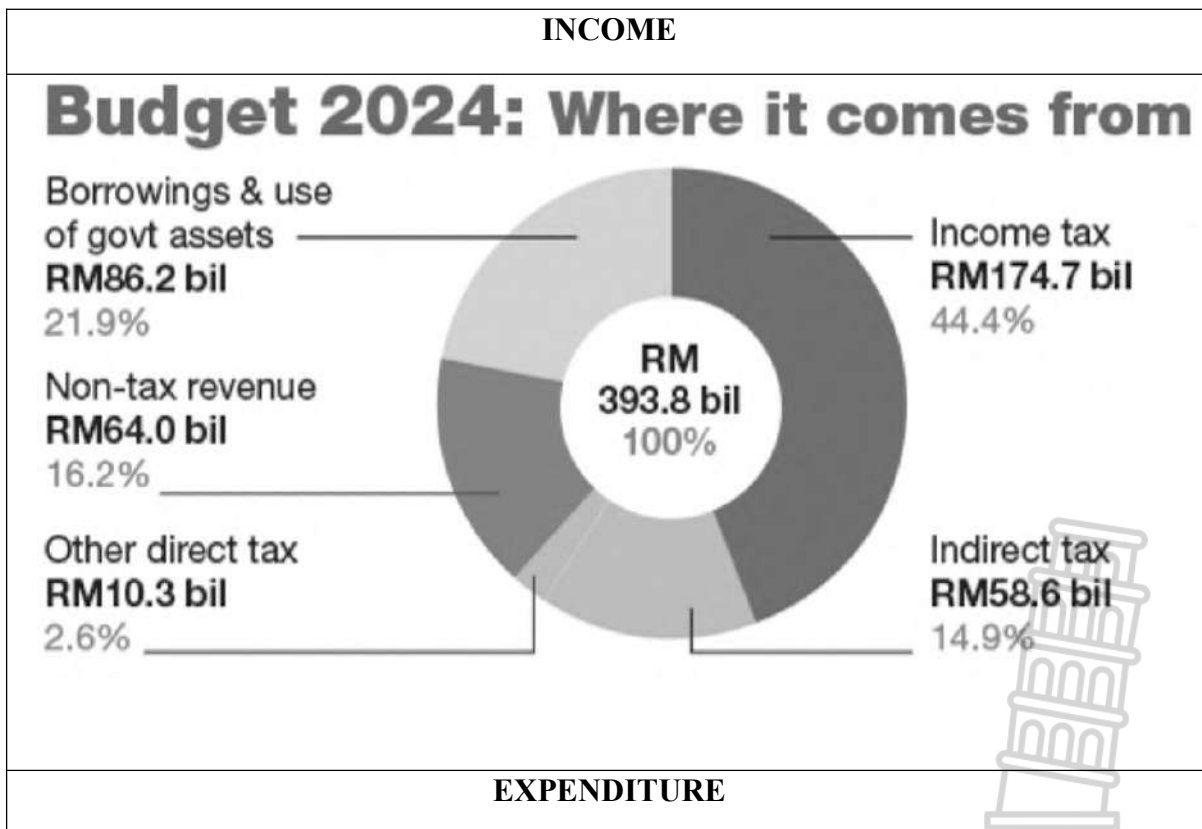
(3)

[46]

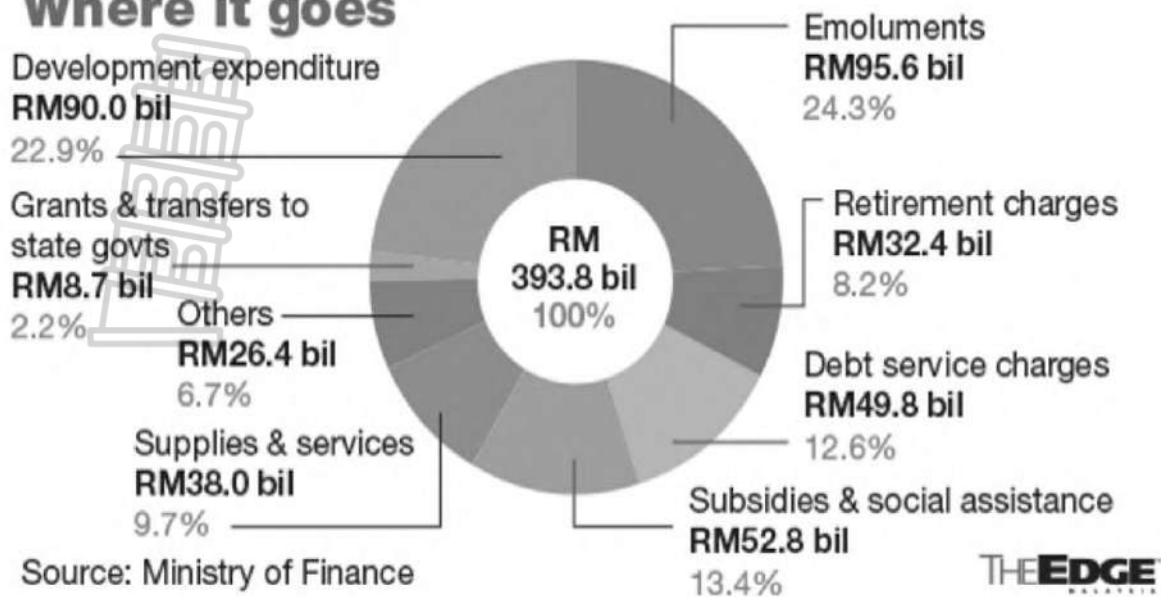
### QUESTION 4.1

#### ANNEXURE B

#### BUDGET SHOWING INCOME AND EXPENDITURE FOR 2024/2025 FINANCIAL YEAR.



## Where it goes



NOTE: ALL AMOUNTS ARE IN BILLION RANDS

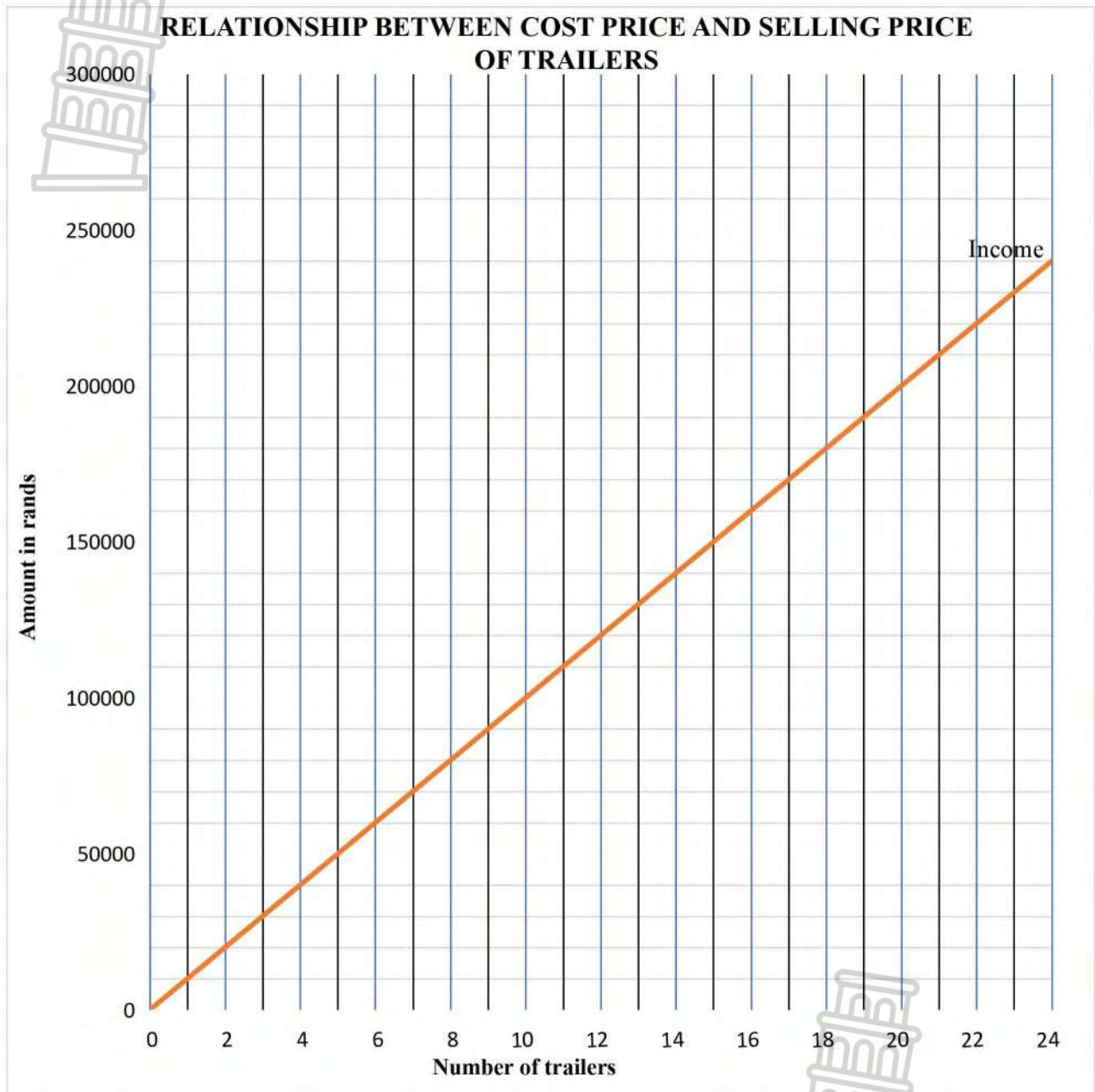
[Source: Ministry of finance]



ANSWER SHEET

NAME: \_\_\_\_\_

GRADE 11



MUNICIPAL, TELEPHONE, TRANSPORT AND BANK FEES

QUESTION 5

5.1

Mlondi lives in Pretoria under the City of Tshwane Municipality. Below is the 2022/23 and the 2023/24 tariff structures used by the Municipality to charge electricity to its clients. All the tariffs exclude 15% VAT.

### ELECTRICITY TARIFF 2022/23

Electricity residential	New tariff 2022/23
1 to 100 kWh	209,70 c/kWh
101 to 400 kWh	245,41 c/kWh
401 to 650 kWh	267,38 c/kWh
More than 650 kWh	288,24 c/kWh

### Tariffs 2023/24

#### Electricity

Electricity is charged on inclining block tariffs. Inclining block tariffs mean that consumers will not be charged at the same amount throughout their usage, but according to inclining tariffs.

Electricity residential	Tariff for 2023/24	Increase
	c/kWh	
1 to 100 kWh	241,37	15,1%
101 to 400 kWh	282,47	15,1%
401 to 650 kWh	307,75	15,1%
650 kWh and more	331,76	15,1%

[Source: www.tshwane.gov.za]

Use the above information to answer the following questions.

5.1.1 Define the term *tariff* in the given context. (2)

5.1.2 Show how the 15,1% increase was determined. (3)

5.1.3 In the month of May 2024, Mlondi used 242,3 kwh of electricity. Determine the total

cost (in Rands), including VAT for using electricity in May.

(6)

5.1.4 In September 2022, Mlondi paid a total invoice of R1 481,40 including VAT for using electricity units.

Calculate the number of electricity units (in kwh) he used in the month of September 2022.

(6)

5.1.5 Name any TWO ways in which Mlondi and other Tshwane residents can save electricity.

(2)

5.2

Mlondi is a Nedbank client. Below is a Nedbank PAYU and Savvy account tariff structures.

Nedbank PAYU Account	2023 Fees	R500 transaction	2024 Fees	R500 transaction	% Change
Withdrawal (Native)	R10.00/R1000	R10.00	R11.00/ R1000	R11.00	+10%
Withdrawal (Other)	R12.00+R2.50/R100	R24.50	R12.00+R2.50/R100	R24.50	–
Withdrawal (POS)	R2.00	R2.00	R2.00	R2.00	–
Deposits (ATM)	R1.50/R100	R7.50	R1.65/ R100	R8.25	+9.9%
Debit orders (internal)	R3.50		R3.50		–
Debit orders (external)	R3.50		R3.50		–
Account fee (Monthly)	Free		R5.00		+R5.00

Nedbank Savvy Account	2023 Fees	R500 transaction	2024 Fees	R500 transaction	% Change
Withdrawal (Native)	R2.50/R100	R12.50	R2.65/ R100	R13.25	+5.9%
Withdrawal (Other)	R12.00+R2.50/R100	R24.50	R12.00+R2.65/R100	R25.25	+3.06%
Withdrawal (POS)	Free	Free	Free	Free	–
Deposits (ATM)	R1.50 / R100	R7.50	R1.65/ R100	R8.25	+9.99%
Debit orders (Internal)	Free		Free		–
Debit orders (external)	Free		Free		–
Account fee (Monthly)	R115.00		R115.00		–

[Source: [businesstech.co.za](http://businesstech.co.za)]

Use the information above to answer the following questions.

5.2.1 Define the phrase *part thereof* in the given context.

(2)

5.2.2 Mlondi has a Nedbank Savvy account. He claims that for him to withdraw an amount of R850,00 from another bank in 2024 cost him R1,35 more compared to withdrawing the same amount in 2023.

Use calculations to verify his claim.

(6)

5.2.3 Determine the difference in the monthly Nedbank Savvy account and the Nedbank PAYU account in 2024.

(2)

5.2.4 Mlondi's sister uses the Nedbank PAYU account. She made the following transactions in April 2024.

- Cash withdrawal of R5 550 from (native) own ATM
- Cash deposit for her daughter's school fees of R4 340
- Cash withdrawal POS of R380,00

Determine her total charges, including the monthly account fee, she paid in the month of April 2024

(6)

**[35]**



6.1

Mbhekeni wants to hire a truck to transport his belongings and other goods from his previous place of work to a new place of work that is 500 km away from each other. He approached two transport hiring companies and was given the following two different options.

**INTER TOWN TRANSPORT (ITT)**



**MARK CARGO AND FREIGHT (MCF)**



- Charges R500,00 per day plus R2,50 per kilometre travelled

- R400 per day plus R4,00 per kilometre travelled
- 200 km free per day

Distance (in km)	0	100	200	300	400	500	600	700
ITT cost	A	750	R1000	R1250	R1500	R1750	R2000	R2200
MCF cost	R400	400	R400	R800	R1200	R1600	B	R2400

[Source: roadflightexpress.com]

Use the information above to answer the following questions.

6.1.1 Identify the daily fixed cost of Mark Cargo and Freight Company.

(2)

6.1.2 Determine the difference in the variable cost between Mark Cargo and Freight Company and the variable cost of Inter Town Transport Company. (2)

6.1.3 Write down the formula that can be used to determine the daily total cost to hire the Mark Cargo and Freight. Write it as follows: (2)

Total cost = ..... + .....

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

6.1.5 Advise Mbhekeni on the company to use to take his goods and belongings. Support your answer. (2)

6.1.6 Sihle, Mbhekeni's friend, wants to hire a truck as well from either of the two companies, but his distance is 100km more than that of Mbhekeni.


Which company will Sihle choose? Provide a reason for your answer. (3)

---



Below is a Telkom table indicating the tariff structure for calls to some popular international destinations. The calls are charged per second.

**Go global with international outgoing calls**  
Calls to some popular international destinations



		Current		New	
		Peak time	Global Off-peak time	Peak time	Global Off-peak time
<b>Minimum charge</b>		R0.63	R0.63	R0.63	R0.63
		Current	Global Off-peak time	New	Global Off-peak time
		Peak time	Global Off-peak time	Peak time	Global Off-peak time
<b>UK</b>	⊖	R0.60	R0.60	R0.60	R0.60
<b>USA</b>	⊖	R0.60	R0.60	R0.58	R0.58
<b>Canada</b>	⊖	R0.60	R0.60	R0.57	R0.57
<b>France</b>	⊖	R0.75	R0.75	R0.73	R0.73
<b>Australia</b>	⊖	R0.75	R0.75	R0.82	R0.82
<b>Portugal</b>	⊖	R0.81	R0.81	R0.68	R0.68
<b>Germany</b>	⊖	R1.13	R1.13	R1.13	R1.13
<b>Botswana</b>	⊖	R1.43	R1.43	R1.43	R1.43
<b>India</b>	⊖	R1.13	R1.13	R1.13	R1.13
<b>Namibia</b>	⊖	R1.13	R1.13	R1.13	R1.13
<b>Zimbabwe</b>	⊖	R1.54	R1.54	R1.54	R1.54

These charges are also applicable to PrepaidFone and WorldCall; actual calls are charged per second with a minimum charge per call.

Use the information above to answer the following questions.

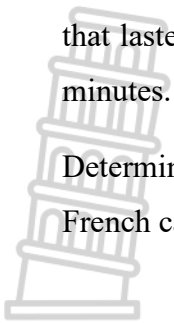
6.2.1 Identify ONE country that showed a decrease of more than 10 cents in the new tariff from the current tariffs.

(2)

6.2.2 Determine the minimum peak and off-peak tariff that will apply when making a call to any of the popular international destinations.

(2)

6.2.3 A Telkom client made global off-peak calls to two countries. First call to France that lasted for 3 minutes 31 seconds and the last one to Australia that lasted for 4 minutes.



Determine how much more the client paid for the Australian call compared to the French call.

(7)

6.2.4 Determine the probability, to the nearest percentage, of randomly selecting a country having a new global off-peak tariff more than R1,40.

(4)

Mlondi is the owner of HR Cabs, meter taxis in Piet Retief where he transports his clients from the town centre to the surrounding residences and other areas.



[Source: [www.hrcabs24.com](http://www.hrcabs24.com)]

Below are the details for the charges to the clients:

- R30 basic fee
- R2,00/km for the first five kilometers then R2,50 for any additional kilometer travelled
- For return trips R250/hour or par thereof for waiting (the basic and the per kilometer tariffs only apply on a one way drop.)
- Offering an exclusive 10% discount on your next ride
- Comfort, reliability, and great value – all in one booking.



Use the information above to answer the following questions.

6.3.1 Identify the percentage discount offered by HR cabs to regular clients. (2)

6.3.2 Write down a formula that can be used by Mlondi to determine his income he will receive for his cab from a customer who will travel for 5km or less. (2)

6.3.3 A customer hired one of the HR Cabs and travelled  $4\frac{1}{2}$  km.  
Determine the total cost he paid for the cab hire. (2)

6.3.4 Mr. Nkomonde, a customer riding for the second time, hired the cab to a meeting venue 17km away from town. The meeting took 45 minutes whilst the cab waited for him.  
Calculate the total cost Mr. Nkomonde paid the driver of the cab.

(10)

[46]



QUESTION 7

In March 2026, the Durban Exhibition Centre hosted the Le Creuset Factory to Table (FTT) sale. On Day 1, record-breaking crowds caused massive delays. The waiting times for both the ENTRANCE QUEUE (to get into the hall) and the PAYMENT QUEUE (to check out) were monitored throughout the day.



Source: Adapted from le creuset.co.za

**NOTE:** Le Creuset is a famous French cookware brand that is famous for manufacturing top quality, premium cookware.



Table 1 below lists the Wait Times for shoppers arriving at different times during the day.

TABLE 1: WAIT TIMES OF SHOPPERS ARRIVING AT DIFFERENT TIMES OF THE DAY

ARRIVAL TIME	ENTRANCE QUEUE WAIT (MINUTES)	PAYMENT QUEUE WAIT (MINUTES)
06:30		
08:00		
09:30		
11:00		
12:30		

**NOTE:** EACH POT REPRESENTS 15 MINUTES

Use the information and table provided above to answer these questions.

- 
- 7.1 Classify the data represented by Wait Times in Table 1. (2)
- 7.2 State the data collection instrument most likely used by Le Creuset staff to track these specific wait times during the event. (2)
- 7.3 Arrange the Entrance Queue Wait times in descending order. (2)
- 7.4 Draw a suitable graph on Annexure B to compare the Entrance Queue Wait and Payment Queue Wait for the different arrival times. (6)
- 7.5 Compare the trends of the two queues. As the morning progressed from 06:30 to 12:30, state what happened to the Entrance Queue versus the Payment Queue. (4)
- Give a possible reason for this shift.
- 7.6 A shopper claimed that it didn't matter if she arrived at 08:00 or 09:30, she would have spent the same total amount of time waiting in queues anyway. (4)
- Verify if this claim is valid. Show all calculations.
- 
- 7.7 Based on the traffic volumes and wait times, suggest ONE strategy that the organizers could implement on Day two to reduce the Payment Queue bottleneck. (2)
- 7.8 Social media influencers were actively involved in canvassing shoppers' opinions on the sale for social media. A post stated that 98% of shoppers found the Factory to Table Sale was the best shopping experience of 2026. (4)
- Provide TWO reasons why this sample is not a fair representation of all shoppers at the

7.9 On Day 1, the Durban Exhibition Centre had a stock of 1 200 Signature Round Casseroles. By 12:00, only 300 remained. Additionally, a survey of 200 shoppers in the queue showed that 140 were from Durban, 40 were from the North Coast and 20 had travelled from Pietermaritzburg.

7.9.1 If a shopper is picked at random from the survey group, determine the probability, as a percentage, that the shopper travelled from Pietermaritzburg. (3)

7.9.2 Determine the probability, as a decimal, of a shopper travelling from neither the North Coast nor Pietermaritzburg. (3)

7.9.3 A shopper reached the shelf at 12:15. Determine the probability, as a simplified fraction, that he/she will not be able to get a Signature Round Casserole. (3)

7.10 A recent study conducted among young professionals aged between 24 and 30 years old revealed that this demographic strongly favoured purchasing Le Creuset cookware, despite the hefty price tag. (2)  
Suggest a possible reason for this trend.

7.11 *“Our VIP Mystery Box selection has grown by 300% compared to last year!!”*

Le Creuset used the statement above to intensify their marketing campaign in the run up to the sale. A Le Creuset Mystery Box is a special surprise package sold exclusively at their Factory to Table Sale events.

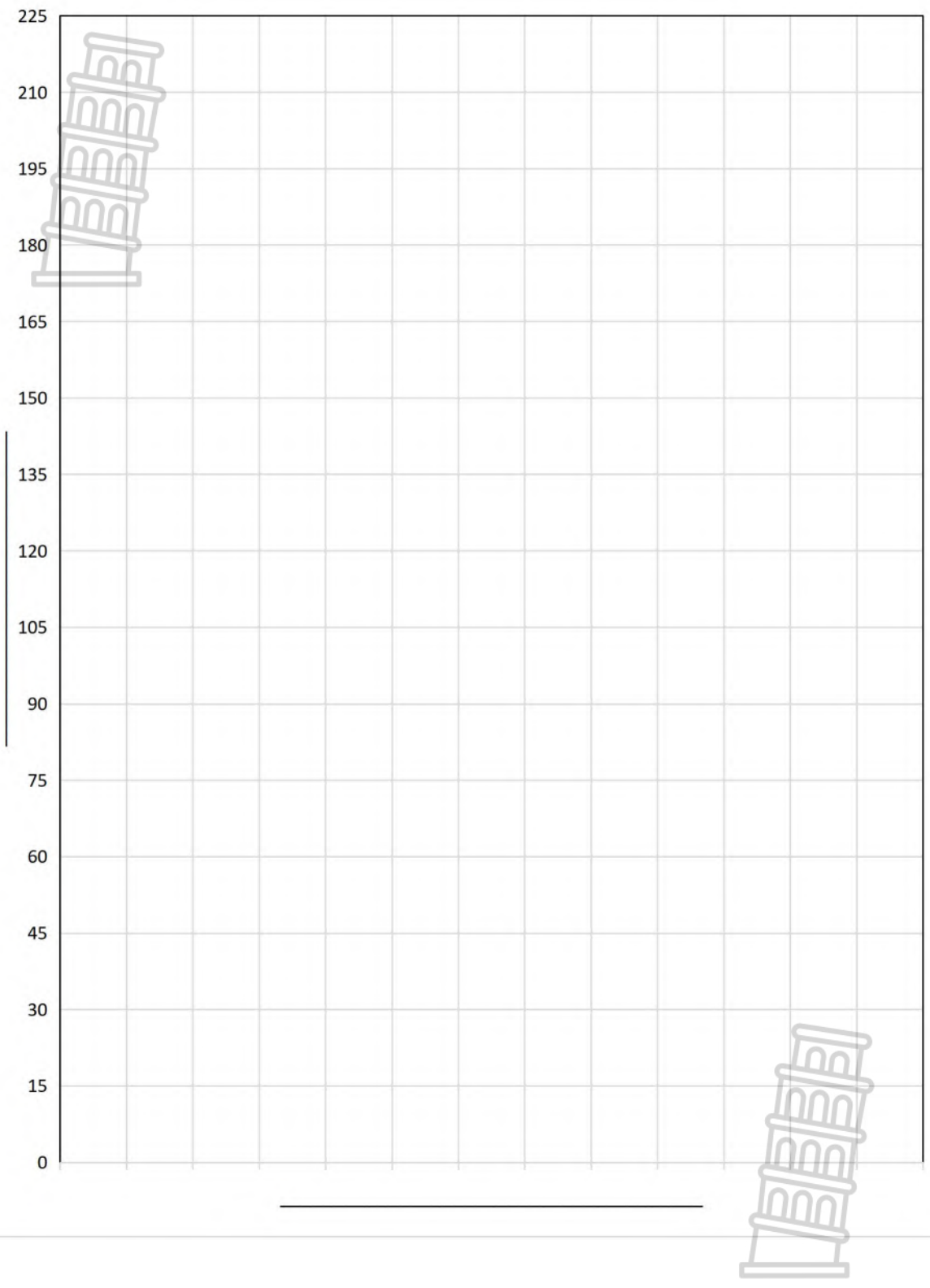
There were two types of Mystery Boxes available in the previous year. This year there were eight types of Mystery Boxes.

7.11.1 Verify, showing all calculations, if the percentage increase of 300% is correct. (4)

7.11.2 Critically discuss why using a percentage in this context could be considered data bias to impress potential customers. (2)

**ANNEXURE B: Question 7.4**





QUESTION 8

8.1 On a particular Saturday, Traffic Officer Smith was monitoring the speed of vehicles travelling on the N2 at Amanzimtoti using a laser camera. The speed limit on national roads is 120 kilometres per hour (km/hour). He recorded the speeds of a sample of vehicles that passed the point in an hour in Table 2.

**Table 2: Speeds in km/hour of vehicles passing through a point in Amanzimtoti**

80	60	120	100	120	82	110
110	115	112	120	128	132	140
83	97	112	100	90	111	125
128	117	98	100	100	122	119
100	120	119	123	130	129	112

Source: [www.road/traffic/south//e](http://www.road/traffic/south//e)

Use the information and TABLE 2 to answer the questions that follow.

8.1.1 State whether the data in Table 2 is discrete or continuous.

Give a reason for your answer.

(3)

8.1.2 Name the data collection method used.

(2)

8.1.3 Name the instrument that was used to monitor the speed of the vehicles.

(2)

8.1.4 Vehicles are allowed to exceed the speed limit of a road up to a maximum of 10 km/hour before the driver is liable to be fined. Determine the probability of a driver receiving a fine. Leave your answer as a decimal.

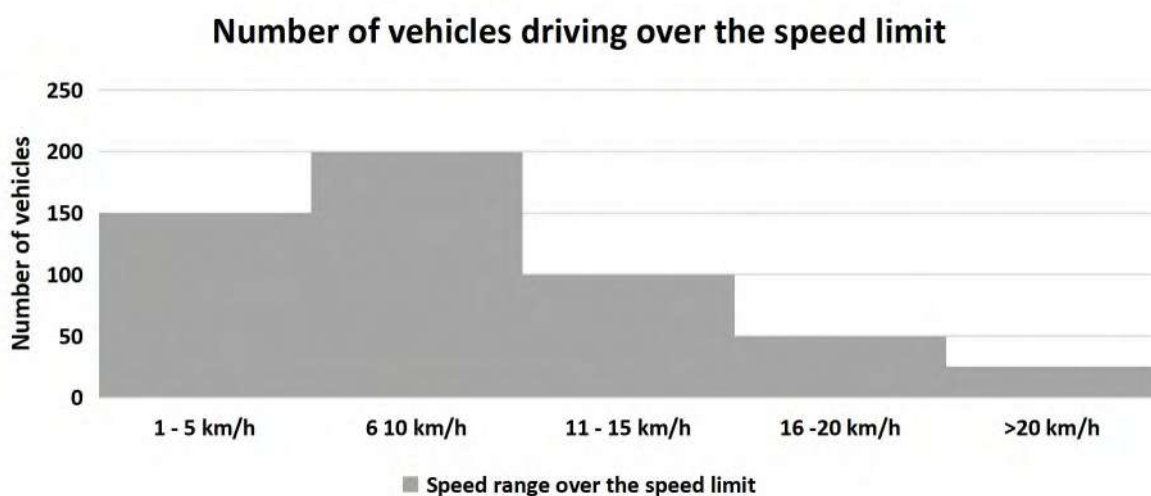
(3)

8.1.5 Calculate the percentage of vehicles driving in accordance with the speed limit. (3)

8.1.6 Write the ratio of speeds under the speed limit to those above the speed limit as a unit ratio in the form \_\_\_\_ : 1. (3)

Leave your answer rounded to ONE decimal place.

8.2 A traffic department collects data on 525 vehicles to analyse speeding habits on a specific road with a speed limit of 80 km/hour. The graph below displays the data collected.



[Adapted from google.co.za]

Use the graph above to answer the questions below.

8.2.1 Explain why a histogram was used to represent the data collected. (2)

8.2.2 A statement was made that the graph represents ungrouped data. Do you agree with this statement? Give a reason to substantiate your answer. (3)

8.2.3 Use the data in the graph to construct a suitable frequency table. Provide suitable headings for the columns. You do not need to do a tally. (7)

8.2.4 State the step in the statistical cycle represented by drawing the frequency table. (2)

8.2.5 The statement below is FALSE. Correct the statement and give a suitable reason for your choice. (3)

The median class interval is 11-15km/hour.

8.2.6 Determine the modal class interval. (2)

8.2.7 Write the number of vehicles travelling at 16- 20km/hour over the speed limit as a percentage of the total number of vehicles travelling over the speed limit. (3)

8.3

The KZN Department of Transport, which oversees the RTI, allocated its 2025/ 2026 BUDGET as below.



**TOTAL BUDGET IS JUST OVER  
R13 BILLION**

The KZN Department of Transport, which oversees the RTI, allocated its 2025/ 2026 BUDGET as above.

from google/com

Use the information supplied above to answer the questions below.

8.3.1 Arrange the five budget allocations in ascending order. (2)

8.3.2 Identify the outlier among the five budget allocations. Give a reason for your choice. (3)

8.3.3 Determine the median budget allocation. (2)

8.3.4 Explain why the mean would not be considered a reliable measure of central tendency to best describe the data. (2)

8.3.5 Write the ratio of the Total Budget to Community Based Programmes, in a simplified form. (3)

8.3.6 Rewrite the difference between the allocation for Transport Infrastructure and Administration as a number with numerals only. (4)

[54]

**SUMMARISING DATA, REPRESENTING, INTERPRETING AND ANALYSING DATA.**

**QUESTION 9**

9.1 TABLE 1: below gives definitions of terminology used in Mathematical Literacy.

<b>TABLE 1: DEFINITIONS OF TERMINOLOGY USED IN MATHEMATICAL LITERACY</b>	
<b>LETTER</b>	<b>DEFINITIONS</b>
<b>A</b>	An instrument that is used to collect data.
<b>B</b>	The likelihood/ chance of an event taking place.
<b>C</b>	The sum of values divided by the number of values.
<b>D</b>	Divides an arranged set of data into two equal parts.
<b>E</b>	The difference between the highest and the lowest value
<b>F</b>	The data that is obtained through measuring.

<b>G</b>	The most frequently appearing value in a set of data.
<b>H</b>	Data that can be counted

Use TABLE 1 above and match the definitions with the terminology below. Write only the letter (A-H) next to the question number (9.1.1 to 9.1.4),

e.g. 9.1.1 K

9.1.1 Median (2)

9.1.2 Questionnaire (2)

9.1.3 Continuous data (2)

9.1.4 Probability. (2)

9.1.5 Range (2)

9.2 Below are the March Test results for ten Grade 11 Mathematical Literacy learners. The test was out of 100 marks.  
 15    60    75    67    68    73    60    75    58    60

Use the information above to answer the questions that follow.

9.2.1 Identify an outlier in the given data set of marks. (2)

9.2.2 Determine the mode for the data set of marks (2)

9.2.3 Identify the type of data above data. (2)

9.2.4 Determine the median mark in the data set. (4)

9.3 Mr Smith drives his son Clive to school daily for five days between Montclair and Durban North. Every day Clive counted the number of Ford Ranger and VW Amarok vehicles they passed on the road.

**TABLE 2: The number of FORD Ranger and VW Amarok counted per day.**

<b>FORD RANGER</b>	22	41	33	29	46
<b>VW AMAROK</b>	15	24	10	16	27

Use the above information to answer the questions that follow.

9.3.1 Write down the data collection method that Clive used to collect the data. (2)

9.3.2 State whether the numbers of vehicles counted per day represents discrete or continuous data. Explain your answer. (3)

9.3.3 Express as a percentage the number of VW Amarok to the total number of cars recorded. round off the answer to the nearest whole number. (4)

9.3.4 Clive stated that he saw on average more than 10 Ford Ranger than VW Amarok vehicles. Verify, with calculations if Clive's statement is VALID. (6)

9.4

A clinic in Durban recorded the distribution of antibiotics to a sample group of learners at a school to see whether they contracted Diarrhea.

The sample group was made up of nine classes from Platinum High School.

The results are shown in Table 3 below.

**TABLE 3: THE RESULTS OF LEARNERS WHO CONTRACTED  
DIARRHEA**

Classes	A	B	C	D	E	F	G	H	I
Number of antibiotics	35	30	10	50	45	35	20	55	10
Number of learners contracted Diarrhea	40	45	50	5	20	25	50	10	55

Use the information and Table 3 above to answer the questions that follow.

9.4.1 Identify the independent variable in TABLE 3 above. (2)

9.4.2 Draw a scatter plot graph to illustrate the data in TABLE 3 above.

Use the ANSWER SHEET IN ANNEXURE B below for QUESTION 9.4.2 (6)

9.4.3 Identify and explain the correlation in the graph in question 9.4.2 above. (3)

[46]



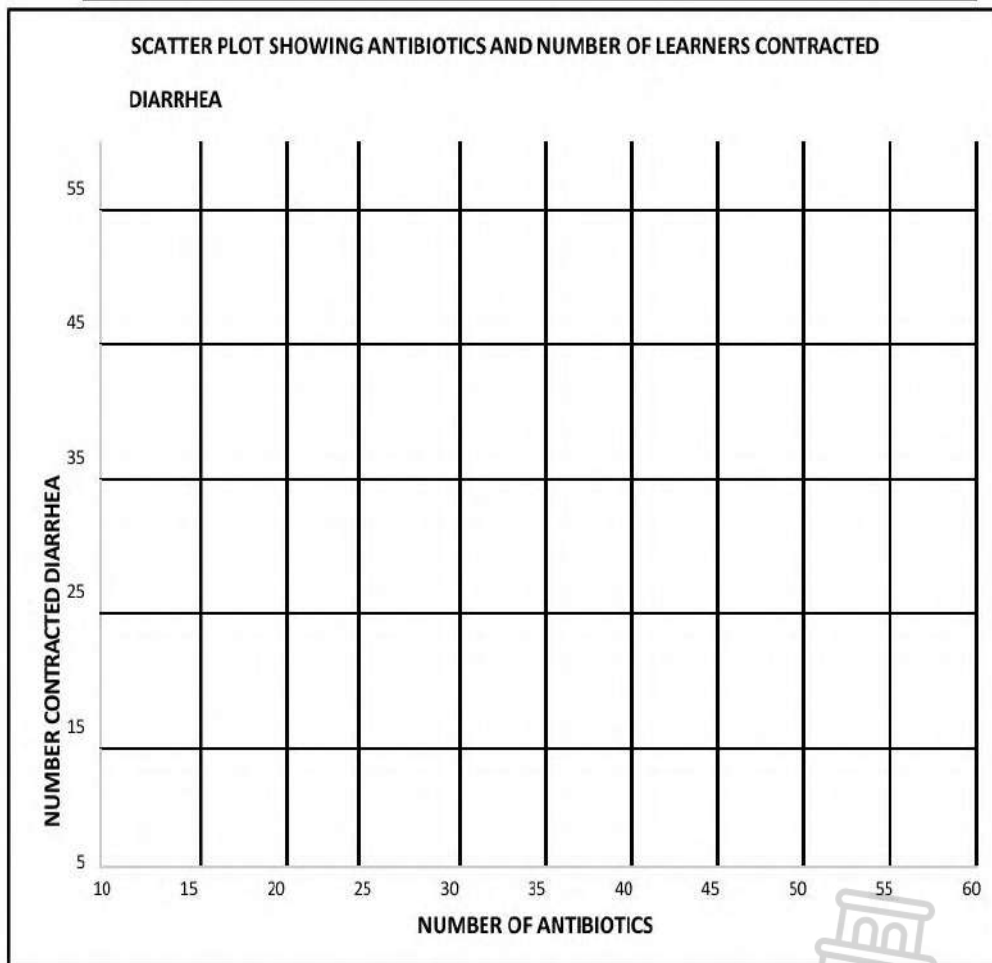
**ANNEXURE B**



NAME OF LEARNER: .....


**QUESTION 9.4.2**

CLASSES	A	B	C	D	E	F	G	H	I
Number of antibiotics	35	30	10	50	45	35	20	55	10
Number of learners contracted DIARRHEA	40	45	50	5	20	25	50	10	55



10.1 **National Matric Results 2025: Historic 88% Pass Rate.** In this comprehensive guide, we break down the 2025 matric performance and provincial rankings.

**TABLE 1: SHOWING PROVINCIAL PASS RATES IN SOUTH AFRICA**



Province	2024 Pass Rate	2025 Pass Rate	Change
<b>KwaZulu-Natal</b>	86,36%	90,60%	+4,24%
<b>Gauteng</b>	85,38%	89,06%	+3,68%
<b>Free State</b>	89,03%	89,33%	+0,30%
<b>North West</b>	84,19%	88,49%	A
<b>Eastern Cape</b>	81,42%	84,17%	+2,75%
<b>Limpopo</b>	79,54%	86,15%	+6,61%
<b>Mpumalanga</b>	76,95%	86,55%	+9,60%
<b>Northern Cape</b>	75,84%	87,79%	+11,95%
<b>Western Cape</b>	<b>B</b>	88,20%	+6,66%

Adapted from [www.schoolhive.co.za](http://www.schoolhive.co.za)

Use the information in Table 1 above to answer the questions that follow.

- 10.1.1 Determine the value of **A**. (2)
- 10.1.2 Identify the province that achieved the third lowest pass rate in 2025. (2)
- 10.1.3 Determine the range of pass rate in 2025. (2)
- 10.1.4 Determine the province that represents the median of 2025 pass rates above. (2)
- 10.1.5 Determine the unit ratio of the Eastern Cape pass rate to the Western Cape pass rate in 2025 write down your answer in the form of **1...** (2)

10.1.6 Write down the modal pass rate in 2025. (2)

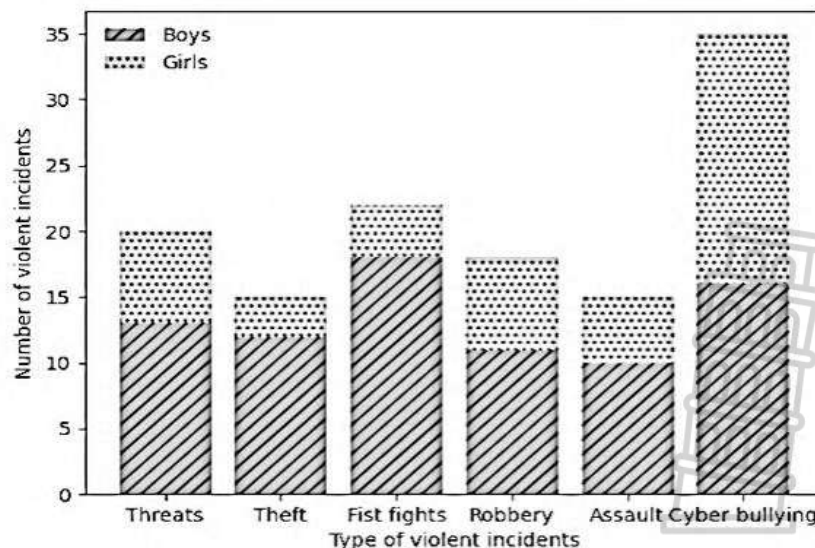
10.1.7 The comparison percentage has not been rounded. Critically comment on the impact of rounding on the comparison of performance in the NSC results from 2024 to 2025. (3)

10.1.8 A province is selected at random from the nine provinces in 2025. Calculate the probability, as decimal fraction, that the selected province has a pass rate of at least 89%. (3)

10.1.9 The mean percentage pass rate in 2024 was 82,25%.  
Use the concept of mean to determine the value of B. (5)

10.2 Violent incidents in South African schools are a national concern. Young persons are as much at risk of being victims of violence at school as they are outside the school. The graph below shows the recorded data of the number of times boys and girls committed certain types of violent acts at Platinum High School in 2024.

Graph showing violent incidents at Platinum High School during 2024.



\***Cyber bullying** is the use of social media like SMS, Whatsapp, and Facebook, X, et cetera on cell phones, tablets or computers to deliberately harass, threaten or intimidate another person.

[Adapted from the South African School Administration and Management System]

Use the information above to answer questions that follow.

10.2.1 Identify the type of graph used to represent the information above. (2)

10.2.2 Identify the most common and least common type of violent incident experienced at Platinum High School in 2024. (2)

10.2.3 Determine the number of theft incident involving girls. (3)

10.2.4 Determine the difference between the total incidents involving boys and the total incidents involving girls at Platinum High School during 2024. (3)

10.2.5 Determine the modal violent incident committed by girls at Platinum High School during 2024. Explain why girls commit this type of violent incident. (3)

[37]

Question 11

11.1 Injoloba High School was closed on the 17<sup>th</sup> September 2024 and reopened on the 1<sup>st</sup> November 2024. The school was closed due to an infestation of \*bats in the ceiling of many classrooms. When the school reopened, Mrs. Mazibuko, the school's nutrition supervisor suggested that a nutritious samp meal be added to the school's \*\*NSNP menu. Below is the recipe from Mrs. Mazibuko's sister in London.



Ingredients:

- 10 kg samp mealies
- 5000g of sugar beans
- 2 kg frozen mixed vegetables
- 1 cup cooking oil
- 5 Tbs Iodised salt
- 625ml of soya mince

---

40 liter pot serves 45 learners.

1 cup = 250ml

1 Tablespoon (Tbs) = 15ml

1 teaspoon (tsp) = 5ml

*\*Bats are small flying mammals that are covered in fur and live in dark small spaces. They carry parasites that can affect Humans.*

*\*\*NSNP - National Schools Nutrition Program*

Use the information above to calculate the following:

11.1.1 Determine the number of days, including the weekends, that the school was closed.

(2)

11.1.2 Convert 625ml of soya mince to cups. (2)

11.1.3 Determine the quantity of frozen vegetables, in grams, required to serve 90 grade 8 learners. (3)

11.1.4 Calculate the cooking start time, if mixing and cooking the samp takes 125 minutes and Mrs. Mazibuko finishes the cooking at 17:19. (3)

11.1.5 Calculate the quantity of iodised salt, in ml, that will be required to prepare the samp meal for a total of 990 learners on any specific day, (4)

11.1.6 Write down the ratio of sugar beans to samp mielies, in the unit form 1: ..... (3)

11.2 Mrs. Mazibuko's sister who lives in London informed her that the temperature of the oven must be set at 105° F to keep the samp meal warm until serving.

11.2.1 Convert the temperature to degrees Celsius, rounded off to the nearest °C.

You may use the following formula:

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

11.2.2 Mrs Mazibuko's sister recommends that each pot dimensions be approximately 29 inches in diameter and 38 inches in height. Convert these measurements to centimetres, rounded off to nearest whole number. (5)

(1 inch = 2,54 cm)

11.2.3 On the 18<sup>th</sup> November 2024 the grade 8 learners complained that the samp meal was very salty. Mrs Mazibuko's sister claimed that the school used an incorrect quantity

of 11 ounces (oz) of salt to serve the 90 learners. Verify, with calculations, if her claim is valid.

(6)

$$(1\text{ml} = 1,217\text{ g})$$

$$(1\text{ ounce} = 28,3495\text{g})$$

11.3 Mrs. Mazibuko consults the following information on Body Mass Index (BMI) as she is concerned about the health statuses of the learners at school.

The BMI (Body Mass Index) of a person who is over 20 years of age can be calculated by using the following formula:

$$\frac{\text{Weight (in kg)}}{[\text{Height in (m)}]^2}$$

According to this value, an adult can be classified according to the following table:

BMI	Calculation
Less than 18,5	Underweight
From 18,5 to 24,9	Normal
From 25 to 29,9	Overweight
Above 30	Obese

Use the above information to answer the following.

11.3.1 Calculate the BMI of the following two people, rounded off to 1 decimal place:

Person 1: Weight: 65 kg; Height: 1,54 m

(6)

Person 2: Weight 55,45 kg; Height: 1,778 m tall.

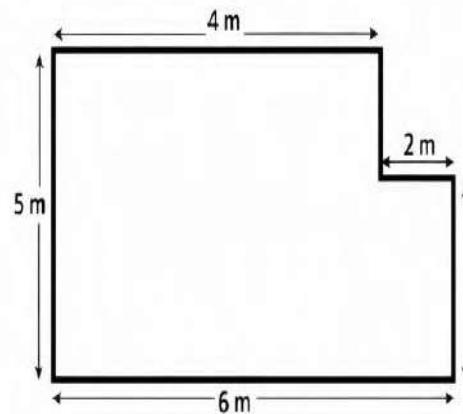
11.3.2 Use the above table to comment on the weight status of the two people in Question 11.3.1 if they are adults.

(2)

11.3.3 Is Mrs. Mazibuko justified in her concerns about the health statuses of the learners at school. Provide an explanation for your answer.

## Question 12

- 12.1 Thabo is building a new fenced chicken coop\* in his backyard. The chicken coop will be made in the shape as shown in the diagram below. He needs to install a wire fence along the entire perimeter of



the chicken coop.

\*a chicken coop is a cage or pen in which chickens are kept.

Use the information above to calculate the following:

- 12.1.1 Calculate the total length of the wire fencing that Thabo will need to enclose the entire chicken coop.

You may use the following formula:

$$\text{Perimeter} = 2(L + W)$$

(3)

- 12.1.2 The fencing costs R50 per meter. Determine the cost of the fencing for the chicken coop.

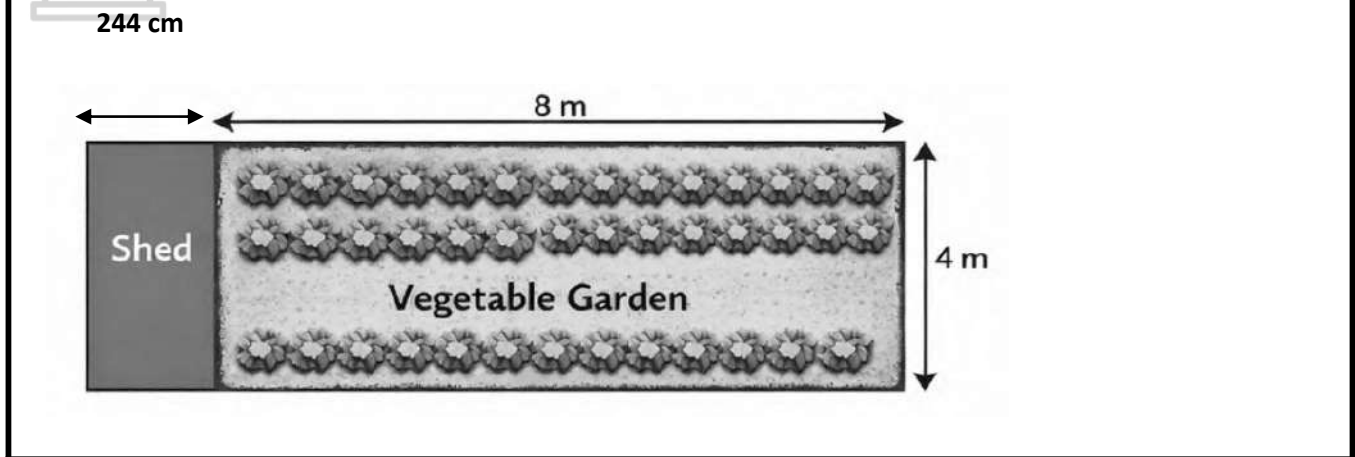
(2)

- 12.1.3 Thabo decides to cover the top (roof) of the chicken coop with the wire fencing as well. If the width of the wire fencing is 2,5m, determine the length of wire fencing he will need for the roof of the chicken coop.

(3)

12.1.4 Hence, determine the total cost of the wire fencing for the chicken coop. (3)

12.2 Thabo's wife Marcy wants to plant a vegetable garden with a wooden shed in the backyard as well. She draws a diagram of the plan of the vegetable garden. Below is the plan with the dimensions. The garden will have a wooden fencing



Use the information above to calculate the following:

12.2.1 Calculate the perimeter of the entire vegetable garden, including the shed. (4)

You may use the following formula:

$$\text{Perimeter} = 2(L + W)$$

12.2.2 If Marcy wants to put a wooden fence around the vegetable garden, excluding the shed. The shed wall next to the garden will not have the fence. Determine the number of meters of fencing will she need to buy.

You may use the following formula:

$$\text{Perimeter} = 2(L + W)$$

12.2.3 The fencing costs R62 per meter. Calculate the total cost of the fencing for the garden. (2)

Downloaded from Stanmorephysics.com  
12.2.4 Provide a reason why Marcy might want to put a fence around the garden. (2)

12.2.5 Calculate the area of the vegetable garden.

You may use the following formula: (2)

$$\text{Area} = \text{length} \times \text{width}$$

12.2.6 The garden bed is dug at a depth of 15cm. Determine the volume of fertilised garden soil that is needed to fill the garden bed, in  $\text{m}^3$ .

You may use the following formula: (3)

$$\text{Volume} = \text{length (L)} \times \text{width (W)} \times \text{height (H)}$$

12.3 Marcy was thinking about the shed, the effect of weathering on it, and its purpose. She has decided to paint the wooden shed. The 3D-drawing of the shed is shown below.



Use all the information from above to answer the following.

12.3.1 Determine the total surface area of the walls to be painted, including the door, in  $\text{m}^2$ .

You may use the following formula:

$$\text{Surface Area} = 2 (\text{L} \times \text{W}) + 2 (\text{L} \times \text{H}) + 2 (\text{W} \times \text{H}) \quad (7)$$

12.3.2 The paint specialist mentions to Marcy that the outside walls of the shed must be sealed with a double layer of a waterproof sealant paint. A one litre tin of the sealant paint covers an area of  $15\text{m}^2$ . Determine the amount of sealant paint required in litres. (4)

12.3.3 The roof has a total interior and exterior area of  $17,6\text{m}^2$ . Thabo claims that 17 litres of the sealant paint as a double layer will be required to paint the exterior and the interior, of the roof and the walls of the shed. Use calculations, and the information from 12.3.2 to verify Thabo's claim. (7)

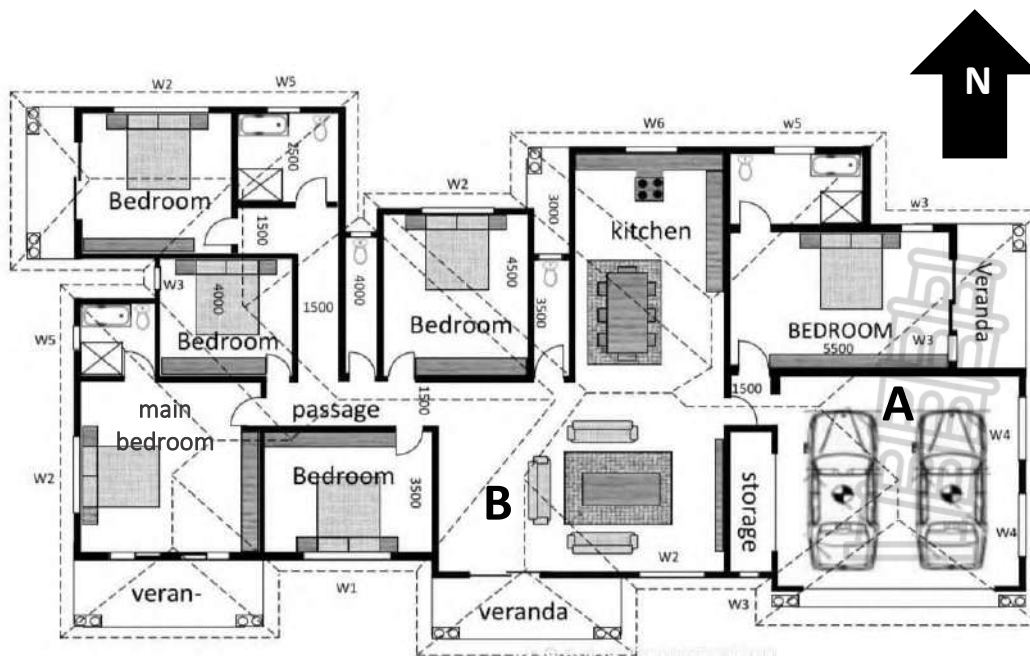
12.3.4 Provide 2 reasons to build a shed in the garden, according to this context. (4)

[48]

## BUILDING PLANS, ASSEMBLING & MODELS

### QUESTION 13

13.1 The plan below shows a six-bedroom house for Mr Duma. Study the floor plan and answer the questions that follow.

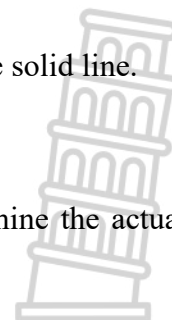


1:100

Use the information above to answer the following.


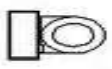
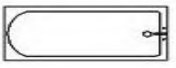
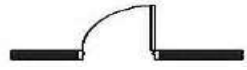
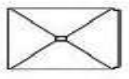


- 13.1.1 Identify the type of plan shown above (2)
- 13.1.2 State the number of sliding doors shown on this plan. (2)
- 13.1.3 Write down the number of windows facing southwards. (2)
- 13.1.4 Identify the type of scale seen on the plan. (2)
- 13.1.5 Explain the meaning of the scale on the plan. (2)
- 13.1.6 Give the label of rooms **A** and **B** on the plan. (4)
- 13.1.7 Determine the general direction of the main bedroom from the kitchen. (2)
- 13.1.8 Measure the length of the southern wall in mm along the solid line. (2)
- 13.1.9 Use the measured length and the given scale to determine the actual length of the southern wall in metres. (4)
- 13.1.10 Determine the probability, as a simplified fraction, of randomly selecting a bedroom with a door that opens towards the left from the outside of the room. (3)



13.2 Below are the symbols used in floor plan and the terminology for each symbol. Choose the letter matching the symbol. Write ONLY the letter (A-E) next to the correct number (13.2.1 – 13.2.4). e.g.;

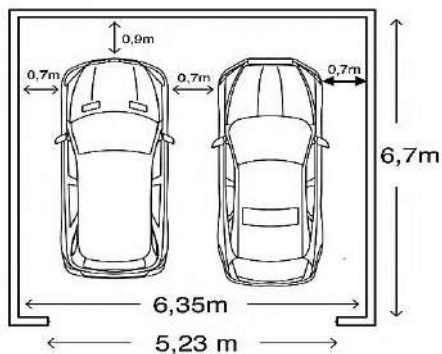
13.2.5 F

13.2.1 Door	A 
13.2.2 Window	B 
13.2.3 Shower	C 
13.2.4 Toilet sit	D 
	E 

(8)

13.3 Below is the diagram showing Mr Duma's garage with dimensions and the picture of his car that is on the right-hand side in the garage.

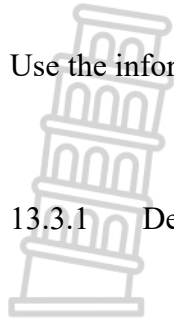
**DIMENSIONS OF THE GARAGE**



**PICTURE OF THE CAR**



Use the information above to answer the following.



13.3.1 Determine the length and the width of the car. (2)

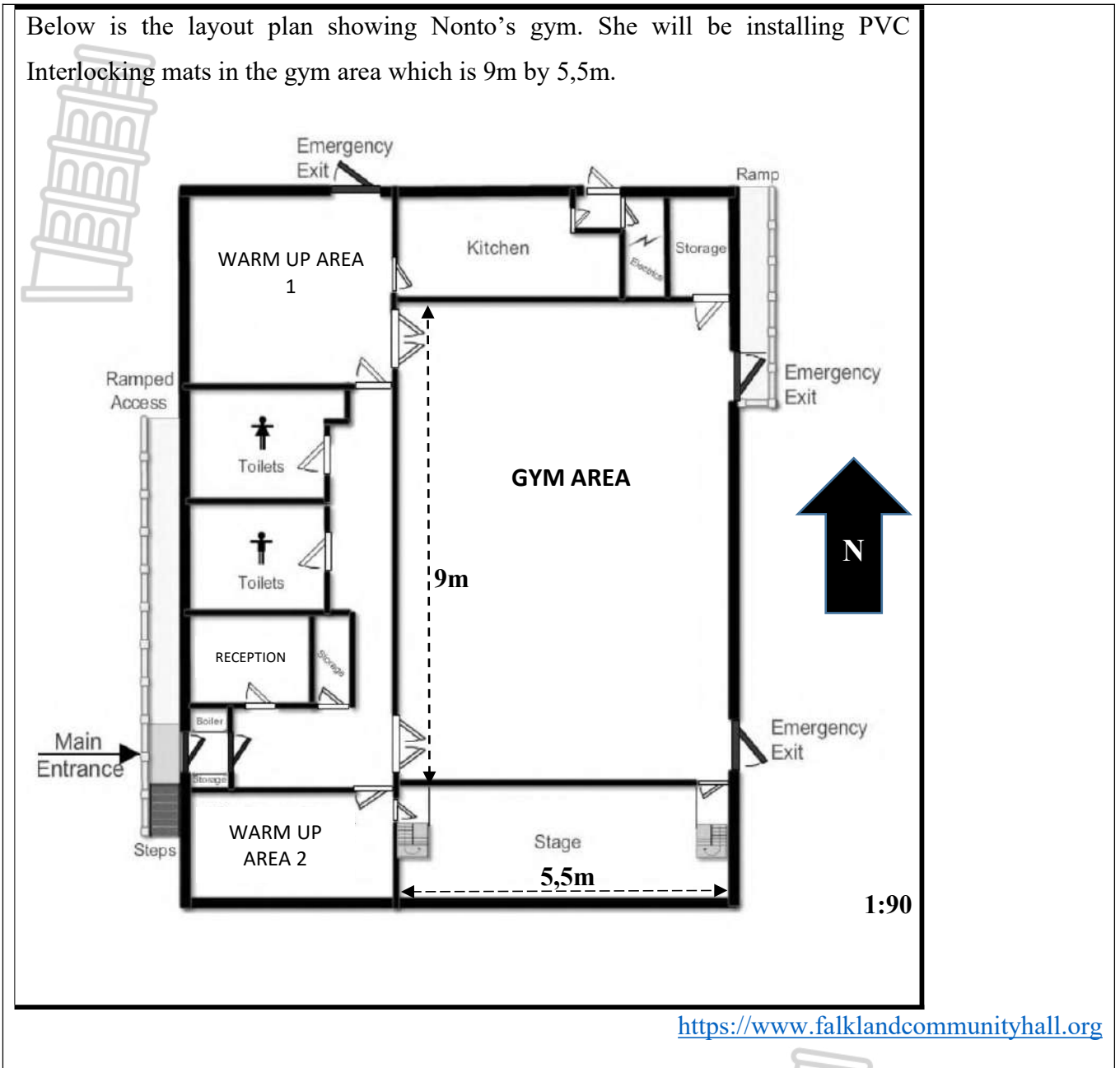
13.3.2 Identify the view of the car is represented by the dimensions  $1449\text{mm} \times 1801\text{mm}$ . (2)

13.3.3 Determine the width of the second car in metres. (3)

**[38]**



14.1 Below is the layout plan showing Nonto's gym. She will be installing PVC Interlocking mats in the gym area which is 9m by 5,5m.



<https://www.falklandcommunityhall.org>

Use the layout plan and the information above to answer the questions that follow.

14.1.1 Define the term *layout plan* in the given context. (2)

14.1.2 Explain the meaning of the scale 1:90. (2)

14.1.3 Give ONE disadvantage of the number scale. (2)

14.1.4 Give the general direction of the male toilet from the kitchen. (2)

14.1.5 Determine the number of emergence exits seen in layout plan. (2)

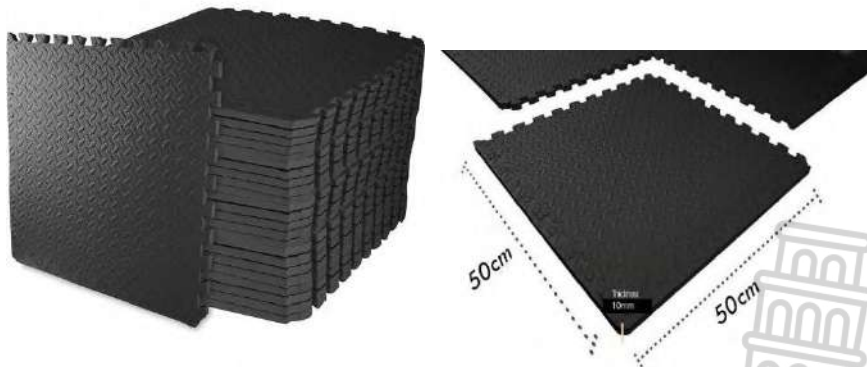
14.1.6 Determine the probability as a percentage of finding a window in the floor plan. (2)

14.1.7 The actual length of the northern wall is 9,4m. Use the scale to determine the length of the northern wall in the layout plan rounded to the nearest centimetre.

(4)

14.2 Nonto is planning on installing PVC interlocking floor mats in the gym area only and not on the stage. The mats come packed in large rectangular boxes which is 1 010mm long, 510mm wide and 905mm high. The mat is 50cm by 50cm and is 10mm thick. The pictures of mats are given below with dimensions.

### PICTURES OF THE INTERLOCKING MATS



[www.amazon.co.za/pvc mats](http://www.amazon.co.za/pvc mats)

Use the information above to answer the following.

14.2.1 Convert the thickness of the mats to metres. (2)

14.2.2 Calculate the number of mats that will fit along the length of the box, if the length of the box is 1 010 mm. (3)

14.2.3 Hence, determine the total number of mats that will fit into one box (5)

14.2.4 Determine the area of the gym in square centimetres.

You may use the formula:

$$\text{Area of rectangle} = \text{Length} \times \text{Width} \quad (4)$$

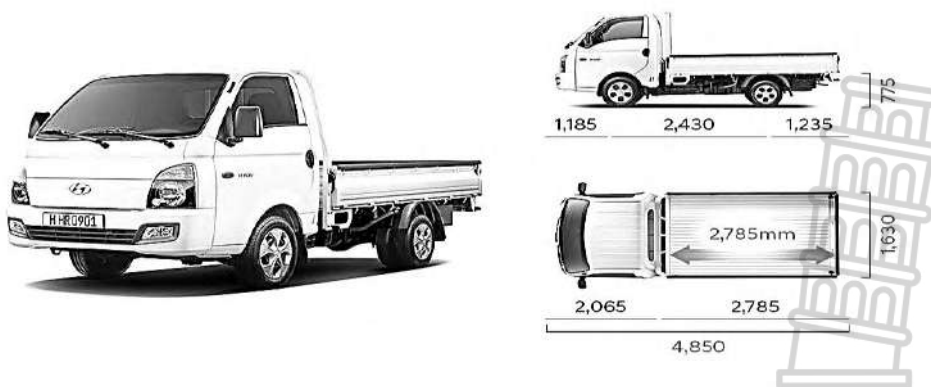
14.2.5 Use the area calculated in 14.2.4 to determine the total number of mats that will fit in the entire gym area. (5)

14.2.6 Determine the number of boxes Nonto will need for the gym area. (3)

14.3 Nonto hired a truck when collecting these boxes of mats.

The truck's load bin is 2 785mm long and 1 630mm wide as shown in the picture below.

**PICTURE OF THE TRUCK (dimensions in mm)**



[www.hyundai.com](http://www.hyundai.com)

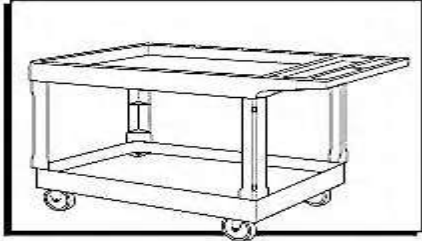
Use the information above to answer the question that follow.

14.3.1 Nonto claims that she will pack more layers when the length of the box is packed against the length of the truck and width of the box along the width of the truck, compared to packing the width of the box against the length of the truck and the length of the box is packed against the width of the truck. (7)

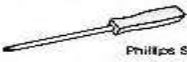
Verify showing calculations if the claim is VALID.

14.4 Below is the assembly diagram of the service cart the gym will be using to supply necessary items to gym members.

**UTILITY CART**

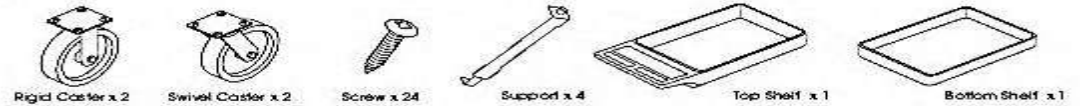


**TOOL NEEDED**



Phillips Screwdriver

**PARTS**



Rigid Caster x 2   Swivel Caster x 2   Screw x 24   Support x 4   Top Shelf x 1   Bottom Shelf x 1

**ASSEMBLY INSTRUCTIONS**

1. Screw supports into the top of the bottom shelf using four screws. (See Figure 1)

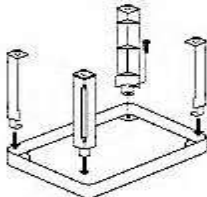


Figure 1

2. Flip bottom shelf over and screw supports into underside of top shelf using four screws. (See Figure 2)

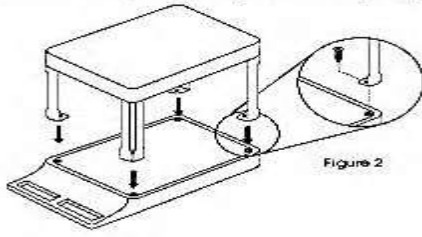


Figure 2

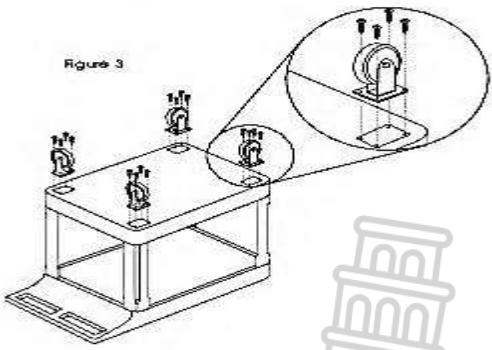


Figure 3

[www.google.com/service+cart](http://www.google.com/service+cart)

Study the assembly diagram above and answer the question that follow

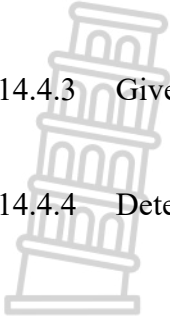
14.4.1 State the quantity of screws needed to assembly the service cart. (2)

14.4.2 Describe the process in illustration 3. (2)

14.4.3 Give the name of the tool that can used to tighten the screws. (2)

14.4.4 Determine the total number of parts needed to assembly the service cart. (2)

**[53]**



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**ELABORATION OF THE CONTENT FOR GRADE 11 (CAPS)**

Different taxonomy levels, according to topics, and some familiar topics/content follow on the next pages

**Taxonomy levels according to topics**


The intention of this section is to provide greater clarity about the types of questions, calculations, applications and/or contexts that fall into the different levels of the Mathematical Literacy taxonomy. **It is essential to emphasise that the tables below do not provide a comprehensive or definitive list of all possible questions, calculations and/or tasks associated with the four levels of the taxonomy. They contain examples of a *small selection* of questions, calculations and/or tasks from the different topics in the curriculum that can be associated with the different levels.** These examples are meant to illustrate more clearly the difference between the demands of a question at the different levels of the taxonomy.

TOPIC: FINANCE				
Section	Level 1: Knowing	Level 2: Applying routine procedures in familiar contexts	Level 3: Applying multi-step procedures in a variety of contexts	Level 4: Reasoning and reflecting
<b>Financial documents and tariff systems</b>	<ul style="list-style-type: none"> <li>* Read information directly from an electricity bill (e.g. <i>date; name of account holder; electricity consumption for the month</i>).</li> <li>* Show how the 'Total Due' on the electricity bill has been calculated by adding together all items listed on the bill.</li> <li>* Show how the VAT value listed on the electricity bill has been calculated when told that VAT is 15% of the value excluding VAT (that is, calculating a direct percentage of an amount).</li> </ul>	<ul style="list-style-type: none"> <li>* Use a given formula to show how the amount charged for electricity consumption shown on the bill has been determined.</li> <li>* Complete a table of values to show the cost of various quantities of electricity consumption.</li> <li>* Use the table of values to construct a graph to represent the cost of electricity consumption.</li> <li>* Increasing/Decreasing by a given percentage</li> </ul>	<ul style="list-style-type: none"> <li>* Replicate the calculations/values shown on the bill for a different electricity consumption value.</li> <li>* Without any scaffolding or guiding questions, draw a graph to represent the cost of electricity on a particular electricity system.</li> </ul>	<ul style="list-style-type: none"> <li>* Choose an appropriate strategy (e.g. <i>tables of values, graphs, and interpreting points of intersection</i>.) to compare the electricity costs of two different electricity systems and make a decision about which system is the most cost effective for a user with particular needs.</li> <li>* Analyse a newspaper article describing proposed increases in electricity tariffs and make deductions about the implications of these increases for consumers.</li> <li>* Rework the answer if the initial conditions change.</li> </ul>
<b>Income, expenditure, profit/loss, income expenditure statements and budgets</b>	<ul style="list-style-type: none"> <li>* Classify items on an income and expenditure statement as fixed, variable and occasional income and expenditure.* Show how total income, expenditure and profit/loss values on an income and expenditure statement or budget have been determined.</li> </ul>	<ul style="list-style-type: none"> <li>* Construct an income and expenditure statement for an individual or a household.</li> <li>* Construct a budget for a small household project.</li> </ul>	<ul style="list-style-type: none"> <li>* Construct an income and expenditure statement for a business that includes a comparison of income and expenditure values over a two-year period.</li> <li>* Construct a budget for a large fundraising event.</li> <li>* Revise a budget if conditions change</li> </ul>	<ul style="list-style-type: none"> <li>* Analyse a budget for a household or business and make recommendation as to how the expenditure should be changed to improve the finances of the household /small businesses.</li> <li>* Compare income and expenditure values for a business or organisation over a two-year period and describe differences and/or trends.</li> <li>* Analyse projected versus actual budget values and explain differences.</li> </ul>

## Grade 11 Examination Guidelines

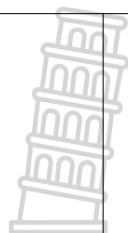
## TOPIC: FINANCE

Section	Level 1: Knowing	Level 2: Applying routine procedures in familiar contexts	Level 3: Applying multi-step procedures in a variety of contexts	Level 4: Reasoning and reflecting
<b>Cost price and selling price</b>	<ul style="list-style-type: none"> <li>* Determine the cost price of an item by adding together given cost values for the component parts of the item.</li> <li>* Determine the income generated from the sale of an item based on a given sales price and given sales volumes.</li> </ul>	<ul style="list-style-type: none"> <li>* Compare the difference between the cost and selling price of an item by calculating the percentage mark-up in price of the selling price from the cost price.</li> <li>* Construct a table of values to show how the cost price of an item changes depending on the number of items made.</li> <li>* Draw a graph from a given table.</li> </ul>	<ul style="list-style-type: none"> <li>* Draw graphs, without scaffolding or guiding questions, to show the costs involved in producing an item and money generated from the sale of the item.</li> <li>* Investigate, through research, the various costs involved in manufacturing an item, and decide on an appropriate selling price for the item.</li> <li>* Calculate profit if only one of income or expenses is given and the other still needs to be calculated.</li> </ul>	<ul style="list-style-type: none"> <li>* Conduct market research on a group of people and use the results of the research to defend a particular selling price for a product.</li> <li>* Interpret graphs showing the cost of production and income generated from the production and sale of an item, and use the graphs to make decisions about the business (e.g. <i>how many items must be manufactured and sold to cover all production costs</i>).</li> </ul>
<b>Break-even analysis</b>	<ul style="list-style-type: none"> <li>* Define 'break-even' in the context in which a problem is posed (e.g. <i>in the context of a business, 'break-even' refers to the income that must be generated to cover all expenses</i>).</li> </ul>	<ul style="list-style-type: none"> <li>* Determine the break-even point of a business from a given table of income and expenditure values.</li> <li>* When given two graphs that intersect, read off the value of the independent and dependent variables at the breakeven point (point of intersection) of the graphs.</li> </ul>	<ul style="list-style-type: none"> <li>* Draw two graphs and identify the point of intersection of those two graphs in order to compare different options (e.g. <i>income vs. expenditure; cell phone contract options; electricity tariff system</i>).</li> </ul>	<ul style="list-style-type: none"> <li>* Explain the relevance of the breakeven point of two graphs in relation to the problem or context for which the graphs have been drawn.</li> <li>* Explain the meaning of different regions on a graph (that is, between different points of intersection) in relation to the problem or context for which graphs have been drawn.</li> <li>* Rework the answer if the initial conditions change.</li> </ul>
<b>Interest, bank loans and investments</b>	<ul style="list-style-type: none"> <li>* Define 'interest' and the 'interest rate'.</li> <li>* Identify interest rate values quoted on bank statements.</li> </ul>	<ul style="list-style-type: none"> <li>* Perform simple interest calculations manually (that is, without the use of a calculator) over multiple annual time periods.</li> <li>* Read values off graphs showing simple and compound investment scenarios.</li> <li>* Calculate compound interest compounded annually.</li> <li>* Increase or decrease a given amount by a certain percentage.</li> <li>* Investigate informal loans, hire purchase agreements and fixed deposit accounts.</li> <li>* Loan agreements between family members where repayments are made once at the end of the loan period.</li> </ul>	<ul style="list-style-type: none"> <li>* Perform compound interest calculations manually (that is, without the use of a formula) over multiple annual time periods.</li> <li>* Complete a table that models a loan scenario and include consideration of a monthly interest calculation, monthly repayment, and monthly amount outstanding on the loan.</li> <li>* Draw graphs from given tables of values to represent loan scenarios.</li> <li>* Calculate compound growth/decline</li> <li>* Determine bank charges for different accounts using given tables and formulae.</li> <li>* Investments in fixed deposit accounts where money is deposited and withdrawn once only</li> </ul>	<ul style="list-style-type: none"> <li>* Compare simple and compound interest graphically.</li> <li>* Compare bank charges of different banks using tariff tables, given formulae and drawn graphs to assess different accounts for individuals with particular needs.</li> <li>* Determine the real cost of a loan and the interest paid on a loan.</li> <li>* Investigate the total amount of money in an investment at the end of a certain time period.</li> <li>* Make sense of graphs showing loans and investment scenarios.</li> <li>* Investigate implications of late payment on credit cards.</li> </ul>

Section	Level 1: Knowing	Level 2: Applying routine procedures in familiar contexts	Level 3: Applying multi-step procedures in a variety of contexts	Level 4: Reasoning and reflecting
<b>Inflation</b>	<ul style="list-style-type: none"> <li>* Define the term 'inflation'.</li> </ul> 	<ul style="list-style-type: none"> <li>* Show by calculation how the price of an item might change if affected by inflation (that is, increasing a value by a percentage).</li> </ul>	<ul style="list-style-type: none"> <li>* Calculate compound growth/decline.</li> </ul>	<ul style="list-style-type: none"> <li>* Show by calculation how the price of an item might change if affected by inflation over multiple time periods</li> <li>* Use knowledge of inflation rates to argue and justify a particular salary</li> <li>* Rework the answer if the initial conditions change.</li> </ul>
<b>Taxation</b>	<ul style="list-style-type: none"> <li>* Write the acronyms "VAT" and "UIF" in full.</li> <li>* Define the terms Gross income, 'VAT inclusive', "VAT exclusive", etc.</li> </ul>	<ul style="list-style-type: none"> <li>* Work with "VAT" in the context of shop purchases, till slips and bills (Water, electricity and telephone).</li> <li>* Work with "UIF" in context of payslips</li> </ul>	<ul style="list-style-type: none"> <li>* Calculate the amount in "VAT inclusive" and "VAT exclusive" prices</li> <li>* Determine how a final price has been calculated by adding 15% "VAT"</li> <li>* Indicate how "UIF" is calculated as percentage of gross income</li> </ul>	<ul style="list-style-type: none"> <li>* Explain why "UIF" is deducted * Investigate how "UIF" has been calculated in the payslip</li> <li>* Analyse and show how values have been determined in payslips including "UIF"</li> </ul>
<b>Exchange rates</b>	<ul style="list-style-type: none"> <li>* Identify the exchange rate between two currencies from a given table or rate board.</li> </ul>	<ul style="list-style-type: none"> <li>* Use a given exchange rate to determine the value of one currency for a specific quantity of another currency.</li> </ul>	<ul style="list-style-type: none"> <li>* Perform currency conversion calculations, taking into account currency exchange fees charged by banks and other financial institutions.</li> <li>* Recognise the meaning of "strong" or "weak" currency</li> </ul>	<ul style="list-style-type: none"> <li>* Understand the "buying power" of a currency in a particular country</li> </ul>



TOPIC: MEASUREMENT				
Section	Level 1: Knowing	Level 2: Applying routine procedures in familiar contexts	Level 3: Applying multi-step procedures in a variety of contexts	Level 4: Reasoning and reflecting
<b>Conversions</b>	<ul style="list-style-type: none"> <li>* Convert between mm, cm, m and km.</li> <li>* Convert between g and kg.</li> <li>* Convert between ml and litres.</li> </ul>	<ul style="list-style-type: none"> <li>* Convert from °C to °F (and vice versa) using given formulae.</li> <li>* Convert between different systems using given conversion factors (e.g. <i>convert from m<sup>3</sup> to litres using the fact that 1 m<sup>3</sup> = 1 000 litres</i>).</li> </ul>	<ul style="list-style-type: none"> <li>* Convert between different systems using given conversion tables, where it is necessary to first identify and then use an appropriate conversion factor from the table.</li> </ul>	<ul style="list-style-type: none"> <li>* Compare solutions to a problem expressed in different units and make a decision about what unit is the most appropriate or useful for the particular context in which the problem is posed.</li> </ul>
<b>Measure length, weight, volume and temperature</b>	<ul style="list-style-type: none"> <li>* Measure accurately using appropriate measuring instruments (e.g. <i>ruler; tape measure; kitchen scale; jug</i>).</li> </ul>	<ul style="list-style-type: none"> <li>* Perform calculations involving measured values (e.g. <i>working out how much longer one piece of wood is than another piece</i>).</li> </ul>	<ul style="list-style-type: none"> <li>* Use measured values in conjunction with other content or skills to complete a larger project (e.g. <i>measure the dimensions of a bedroom to determine the running metres of carpet needed for the floor</i>).</li> <li>* Make adjustments to calculated values to accommodate measurement errors and inaccuracies due to rounding.</li> </ul>	<ul style="list-style-type: none"> <li>* Make decisions about the need for accuracy when performing a measurement in a particular context.</li> <li>* Interpret a measured value and make a decision based on the value (e.g. <i>measure the temperature of a child and decide if the child should be taken to hospital</i>).</li> </ul>
<b>Perimeter, area and volume</b>	<ul style="list-style-type: none"> <li>* Define terms (e.g. '<i>area</i>', '<i>perimeter</i>', '<i>volume</i>', '<i>radius</i>').</li> <li>* Identify from a list of given formulae which formulae relate to perimeter calculations, which relate to area calculations, etc.</li> <li>* Determine the radius of a circle from a given diameter.</li> <li>* Know that area is expressed in units<sup>2</sup> (e.g. cm<sup>2</sup>) and volume in units<sup>3</sup> (e.g. cm<sup>3</sup>).</li> <li>* Know and use formulae for perimeter, area and volume.</li> </ul>	<ul style="list-style-type: none"> <li>* Calculate perimeter, area and volume by substituting given values into given formulae.</li> <li>* Describe relationships between input and output values in a table of data concerning space, shape and measurement.</li> </ul>	<ul style="list-style-type: none"> <li>* Perform preliminary calculations to determine dimensions required in perimeter/area/volume calculations and then calculate perimeter/area/volume (e.g. <i>when asked to determine the volume of concrete needed for the foundations of a house, interpret top view plans of the foundation trench of a house, use the plans to determine the dimensions of the trench, and then calculate the volume of the trench</i>).</li> </ul>	<ul style="list-style-type: none"> <li>* Use perimeter, area and/or volume calculations to complete a project, where it is not stated specifically what type of calculation is required (e.g. <i>when asked to determine the amount of paint needed to paint a building, first interpret plans to determine dimensions of the walls, then calculate the surface area of the walls, then use the paint conversion ratio on the back of the paint tin to determine the required number of litres of paint required</i>).</li> </ul>
<b>Time</b>	<ul style="list-style-type: none"> <li>* Read time values on a clock or watch. *Converting between seconds, minutes and hours</li> </ul>	<ul style="list-style-type: none"> <li>* Record time values and perform calculations with time.</li> </ul>	<ul style="list-style-type: none"> <li>* Interpret time values on a bus time table to determine departure, arrival and travelling times.</li> </ul>	<ul style="list-style-type: none"> <li>* Perform time calculations in conjunction with maps and other travel resources in order to plan a trip (e.g. <i>determine approximate travelling times, appropriate stopping points for refuelling, the time to start a journey in order to arrive at a destination at a</i></li> </ul>



*particular time).*

**TOPIC: MAPS, PLANS AND OTHER REPRESENTATIONS OF THE PHYSICAL WORLD**

Section	Level 1: Knowing	Level 2: Applying routine procedures in familiar contexts	Level 3: Applying multi-step procedures in a variety of contexts	Level 4: Reasoning and reflecting
<b>Scale</b>	<ul style="list-style-type: none"> <li>* Explain the meaning of a given scale (e.g. <i>explain what the scale 1 : 100 means in terms of the measurements on a plan and actual dimensions</i>).</li> </ul>	<ul style="list-style-type: none"> <li>* Use a given scale to determine actual measurements when given measured values, or measured values from given actual values.</li> </ul>	<ul style="list-style-type: none"> <li>* Use a given scale in conjunction with the measurement on a plan/map to determine length/dimensions.</li> <li>* Use a given scale in conjunction with other content or skills to complete a project (e.g. <i>use a given scale to determine the dimensions in which to draw a 2-dimensional plan/ 3 dimensional plan of an object, and then draw the plan</i>).</li> </ul>	<ul style="list-style-type: none"> <li>* Critique the scale in which an object has been drawn and offer an opinion as to a more appropriate scale.</li> <li>* Decide on an appropriate scale to which to draw a picture or build a model, and then complete the project.</li> </ul>
<b>Maps</b>	<ul style="list-style-type: none"> <li>* Identify the labels/names of national roads (e.g. N3) that must be travelled on to travel between two locations.</li> <li>* Identify the names of the towns on the route between two locations.</li> <li>* Identify the scale of a map.</li> </ul>	<ul style="list-style-type: none"> <li>* Identify the position of two locations on a map and use given distance values on the map to determine the travelling distance between the two locations.</li> <li>* Interpret a given set of directions and describe what location the directions lead to.</li> <li>* Provide a set of directions to travel between two locations in a town using street names.</li> <li>* Describe the position of an object in relation to surrounding objects.</li> <li>* Describe the position of a building in relation to other buildings.</li> </ul>	<ul style="list-style-type: none"> <li>* Use a map in conjunction with a distance chart to determine the shortest route to travel between two locations.</li> <li>* Identify a possible route between two locations on a map, measure the distance between the locations, and use a given scale to estimate the distance between the two locations.</li> <li>* Estimate travelling times between two or more locations based on estimated travelling speed and known or calculated distances.</li> </ul>	<ul style="list-style-type: none"> <li>* Critique a proposed travel route in relation to distance, estimated travelling times, etc. and suggest and justify possible alternative routes.</li> <li>* Use maps in conjunction with other travel resources (e.g. <i>exchange rate information; distance chart; bus timetable</i>) and financial information (e.g. <i>fare tables; petrol price</i>) to plan and cost a trip).</li> <li>* Make decisions regarding appropriate stopping points during a journey based on considerations of fatigue, petrol consumption travelling time, etc.</li> </ul>

<p><b>Plans</b></p>	<ul style="list-style-type: none"> <li>* Identify the scale of a plan.</li> <li>* Define terms (e.g. <i>floor plan; elevation plan; layout plan; etc.</i>).</li> <li>* Read off the value(s) of given dimensions on the plan (e.g. <i>the length of the wall is 4 m</i>).</li> </ul>	<ul style="list-style-type: none"> <li>* Use a given key to identify the number of windows/doors/rooms shown on a plan for a building.</li> <li>* Identify on which plan a particular structure is shown (e.g. <i>the door is shown on the North elevation plan</i>).</li> </ul>	<ul style="list-style-type: none"> <li>* Measure dimensions on a plan and use a given scale to determine actual dimensions.</li> <li>* Use plans in conjunction with other content, skills or applications to complete a project (e.g. <i>interpret plans to determine the dimensions of a room in order to establish the amount of carpet needed for the floor of the room</i>).</li> </ul>	<ul style="list-style-type: none"> <li>* Describe an item represented in a plan.</li> <li>* Critique the design of a structure shown on a plan.</li> <li>* Decide on an appropriate scale in which to draw a plan and then draw the plan.</li> <li>* Make connections between plans showing different views of the same structure (e.g. <i>explain which wall shown on a floor plan is represented on a particular side view plan</i>).</li> </ul>
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**TOPIC: MAPS, PLANS AND OTHER REPRESENTATIONS OF THE PHYSICAL WORLD**

Section	Level 1: Knowing	Level 2: Applying routine procedures in familiar contexts	Level 3: Applying multi-step procedures in a variety of contexts	Level 4: Reasoning and reflecting
<p><b>Models</b></p>	<ul style="list-style-type: none"> <li>* Measure the dimensions of a structure for which a model or 2D drawing will be constructed.</li> </ul>	<ul style="list-style-type: none"> <li>* Build a model using a given table of dimensions or a given net/cut-out.</li> </ul>	<ul style="list-style-type: none"> <li>* Use instructions to assemble diagrams, containing words and /or pictures found in manuals</li> <li>* Use a given scale to determine the dimensions in which to build a model or make a 2D drawing, and complete the project.</li> <li>* Build a model and use the model in conjunction with other content, skills or applications to solve a problem (e.g. <i>build a model of a container and use the model to investigate different types of packaging arrangements; or build a model of a container and determine the surface area and volume of the model to investigate the amount of storage space available in the container</i>).</li> <li>* Estimate the quantity of material needed using perimeter, area and volume calculations.</li> </ul>	<ul style="list-style-type: none"> <li>* Decide on an appropriate scale in which to build a model or make a 2D drawing, use the scale to determine dimensions, and complete the project.</li> <li>* Construct and compare two models in terms of storage space and materials used and make a decision about which model will be the better choice for packaging an item.</li> <li>* Analyse a model and critique the layout of the structure shown in the model.</li> <li>* Investigate the best packaging shape to use for packaging a particular product.</li> <li>* Investigate the best packaging shape to use for irregular objects while minimising the wasted space and cost</li> <li>* Investigate the number of furniture that can fit in a venue</li> </ul>

TOPIC: DATA HANDLING				
Section	Level 1: Knowing	Level 2: Applying routine procedures in familiar contexts	Level 3: Applying multi-step procedures in a variety of contexts	Level 4: Reasoning and reflecting
<b>Developing questions and collecting data</b>	<ul style="list-style-type: none"> <li>* Read information directly from a given questionnaire/survey (e.g. <i>the name of the organisation for which the questionnaire is being conducted</i>).</li> <li>* Complete a given questionnaire.</li> </ul>	<ul style="list-style-type: none"> <li>* Conduct a given questionnaire/survey with a group of people.</li> </ul>	<ul style="list-style-type: none"> <li>* Decide on appropriate questions to include on a questionnaire/survey, construct and then conduct the questionnaire/survey.</li> </ul>	<ul style="list-style-type: none"> <li>* Critique the questions/layout of a questionnaire/survey.</li> </ul>
<b>Classifying and organising data</b>	<ul style="list-style-type: none"> <li>* Sort data from smallest to biggest.</li> <li>* Count the number of values in a data set.</li> <li>* State the difference between categorical data and numerical data; discrete and continuous data.</li> <li>* Read information from frequency tables.</li> </ul>	<ul style="list-style-type: none"> <li>* Sort data according to two categories (e.g. <i>sort a set of data separately for females and males</i>).</li> <li>* Complete a given frequency table.</li> <li>* Calculate percentage values to represent the relative sizes of different categories of data.</li> </ul>	<ul style="list-style-type: none"> <li>* When given a raw set of data, sort the data, decide on appropriate intervals (if necessary), and construct a frequency table to organise the data. If necessary, use the frequency table to draw an appropriate graph to represent the data.</li> </ul>	<ul style="list-style-type: none"> <li>* Make a deduction about whether collected information is biased or valid based on the structure of instrument used to collect the data and the way in which the data was collected.</li> <li>* Explain with justification whether data is discrete or continuous.</li> <li>* Analyse data organised in tables and make deductions about trends in the data.</li> </ul>
<b>Measuring data/ Summarising data</b>	<ul style="list-style-type: none"> <li>* Identify the maximum and minimum values in a set of data.</li> <li>* Identify the mode for arranged data.</li> <li>* Identify the median for odd data that has already been arranged.</li> </ul>	<ul style="list-style-type: none"> <li>* Calculate mean and range.</li> <li>* Calculate the median for even data.</li> <li>* Calculate the median if the data is not arranged.</li> </ul>	<ul style="list-style-type: none"> <li>* Calculate the mean, median and modal average for a set of data and decide with reasons which average provides the most accurate representation of the data.</li> <li>* Use data presented on a graph to determine the mean, median, mode and range of a data set.</li> </ul>	<ul style="list-style-type: none"> <li>* Analyse measures of central tendency and make deductions about trends in the data.</li> <li>* Compare measures of central tendency calculated for two sets of data and use these measures to explain differences between the data sets.</li> </ul>
<b>Representing data</b>	<ul style="list-style-type: none"> <li>* Read values directly from the values provided on graphs.</li> </ul>	<ul style="list-style-type: none"> <li>* Draw a specified graph from a given table of data.</li> <li>* Estimate values from given graphs.</li> </ul>	<ul style="list-style-type: none"> <li>* Organise data using an appropriate table, decide on the most appropriate format for representing the data (that is, actual values or percentages), and decide on the most appropriate graph needed to represent the data.</li> </ul>	<ul style="list-style-type: none"> <li>* Analyse graphs and make deductions about trends in the data and predictions for the future.</li> <li>* Identify and describe the use and misuse of statistics and make justified recommendations.</li> </ul>

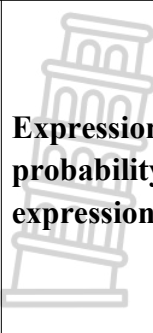
TOPIC: PROBABILITY				
Section	Level 1: Knowing	Level 2: Applying routine procedures in familiar contexts	Level 3: Applying multi-step procedures in a variety of contexts	Level 4: Reasoning and reflecting
<b>Expressions of probability/ Prediction/Evaluate expressions of probability</b>	<ul style="list-style-type: none"> <li>* Identify the percentage chance of rain for a particular town from a weather report in a newspaper.</li> <li>* State the meaning of terms associated with probability (e.g. <i>event; outcome</i>).</li> </ul>	<ul style="list-style-type: none"> <li>* Express the probability of an event using fraction, percentage and decimal notation.</li> <li>* Identify all of the possible outcomes of a particular event (e.g. <i>rolling a dice; gambling game</i>).</li> </ul>	<ul style="list-style-type: none"> <li>* Conduct an experiment to compare the experimental probability of an event to its theoretical probability.</li> <li>* Identify appropriate values from a given table of data values (e.g. <i>on motor vehicle fatalities in South Africa</i>) and express the probability of certain events shown in the table.</li> <li>* Develop a game involving probability and play the game with another learner in the class.</li> <li>* Design simple contingency tables and use them to calculate probabilities.</li> <li>* Draw tree diagrams and use them to calculate probabilities</li> </ul>	<ul style="list-style-type: none"> <li>* Analyse a table of rainfall data for a town and make predictions about the chance of rain in that town during a particular month during the year.</li> <li>* Critique the use of references to probability values in newspaper articles.</li> <li>* Analyse a game involving probability and make a deduction about the fairness of the game.</li> </ul>



Some familiar topics for QUESTIONS 1, 2 and 3

SOME FAMILIAR TOPICS		
TOPIC	SECTION	CONTEXT
<b>FINANCE</b>	<b>Financial documents and tariff systems</b>	Household bills; shopping documents; banking documents; household budgets Documents relating to workplace and small business finance. Municipal tariffs, telephone tariffs; transport tariffs – two or more comparisons
	<b>Income, expenditure, profit/loss, income- and expenditure statements and budgets</b>	Small business – baking bread, tuck shop, street vendor, flea-market stall, cell-phone container; garden services; painting; washing cars, catering; crèche; Personal income and expenditure Business and/or workplace income and expenditure
	<b>Cost price and selling price</b>	Small business – baking bread, tuck shop, street vendor, flea-market stall, cell-phone container; garden services; painting; car wash, catering; crèche;
	<b>Break-even analysis</b>	Small home industry Small business Subsistence farming Tariff systems – electricity, telephone, rental options, etc.
	<b>Interest</b>	Banking and other financial documents
	<b>Banking, loans and investments</b>	Savings account Cheque/ current accounts Fixed deposit account Credit account (with a credit card) and Debit account (with a debit card) Informal loan agreements between family members Investments – fixed deposit accounts only Hire purchase agreements(e.g. <i>Buying furniture on credit</i> )
	<b>Inflation</b>	Influence of inflation on personal/household, business financial activities
	<b>Taxation</b>	VAT and UIF

	<b>Exchange rates</b>	<p>Work with exchange rates presented in foreign exchange tables.</p> <p>Value of currency in relation to others</p> <p>Recognise the meaning of “strong” and “weak” with regard to the relationships between currencies</p> <p>“Buying power” of a currency in a particular country (<i>the value of a currency in relation to the cost of living in that country</i>)</p>
<b>MEASUREMENT</b>	<b>Conversions</b>	Household, school and wider community projects – baking, cooking, catering, building, etc.
	<b>Measure length, weight, volume and temperature</b>	Household, school and wider community projects – baking, cooking, catering, building, etc.
	<b>Perimeter, area and volume</b>	Household, school and wider community projects – baking, cooking, catering, building, etc.
	<b>Time</b>	Household, school and wider community projects – baking, cooking, catering, building, etc.
<b>MAPS, PLANS AND OTHER REPRESENTATION OF THE PHYSICAL WORLD</b>	<b>Maps and Scales</b>	<p>Maps showing:</p> <ul style="list-style-type: none"> <li>• Seating plan and/or layout of a classroom</li> <li>• Layout of buildings and or sports fields at a school</li> <li>• Layout of stores in shopping centres</li> <li>• Seating plans in cinemas and sport stadiums, examinations, weddings, matric dances, etc.</li> <li>• Street maps with and without a grid reference</li> <li>• National and provincial road and rail maps</li> <li>• Strip charts showing distance on a portion of road</li> <li>• Elevation maps – e.g. comrades marathon route</li> <li>• Residential or housing estate</li> </ul>
	<b>Plans</b>	<p>Instruction and assembly diagrams containing words and/or pictures</p> <p>Also all the contexts covered in Maps and Scales</p>
	<b>Models</b>	Packaging containers – fruit juice containers, chocolate boxes, etc.
<b>HANDLING DATA</b>	<b>Developing questions</b>	<p>Test and exam results School sports results National and Provincial:</p> <ul style="list-style-type: none"> <li>• Health statistics</li> <li>• Education statistics</li> <li>• Accidents</li> <li>• Population</li> </ul>
	<b>Collecting data</b>	
	<b>Classifying and organising data</b>	
	<b>Summarising data</b>	
	<b>Representing data</b>	

<p><b>PROBABILITY</b></p>	 <p><b>Expressions of probability/Prediction/ Evaluate expressions of probability</b></p>	<p>Games with coins and dice Weather prediction Pregnancy test/drug test Newspaper articles</p>
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