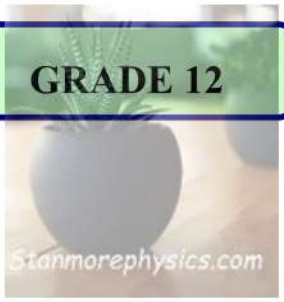
KWAZULU-NATAL PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

CURRICULUM GRADE 10 – 12

DIRECTORATE

LEARNER SUPPORT DOCUMENT

GRADE 12



MATHEMATICAL LITERACY

2026

This document consists of 80

This document serves to assist Mathematical Literacy learners on how to deal with curriculum. It also captures the challenging topics in the Grade 12 work. Activities should serve as a guide on how to assess topics dealt with in this document.

It is hoped that teachers will find this document useful for better learner performance in 2025 and that they will benefit from this document.

Provincial Mathematical Literacy Subject Advisors AND Lead Teachers are to be commended for their contributions and cooperation during the preparation and production of this document.

The document will cover the following:

A	**FINANCE**	
B	**DATA HANDLING**	
C	**MEASUREMENT**	
D	**MAPS AND PLANS**	
E	**PROBABILITY**	

Important Mathematical Literacy Terminologies

MEASUREMENT	
TERM	**MEANING**
Area	The amount of two-dimensional space occupied by a2-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 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 cure 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 cures 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	π, 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**
B	
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.
C	
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).
D	
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.
E	
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.
F	
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.
G	
Group	Put into classes, sort, arrange, organise.
Grouped data	The data given in the form of intervals.
H	

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.
I	
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.
L	
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.
M	
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
N	
Notation	System of figures/symbols to represent numbers, quantities or values.
Numerical data	The data that is given in the form of numbers.
O	
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.
P	
Percentiles	The points that divide the data set into 100 equal parts. Quartile 1 is the 25^{Th} 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^{th} 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^{th} 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.

Q	
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.
R	
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.
S	
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.
T	
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.
U	
Ungrouped data	The data given as individual items or values.
Unlikely	Chance of something happening is less than the chance of it not happening.
V	
Variable	A quantity that can take different values in a situation.
Vertical bar graph	90^0 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.

FINANCE	
TERM	**MEANING**
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-bye	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.

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. $Experimental\ Probability = \frac{\text{number of times the outcome did occur}}{\text{total number of trials (outcomes)}}$
Theoretical probability	is worked out as number of possible successful outcomes divided by total number of outcomes.i.e. $Probability = \frac{\text{number of successful outcomes}}{\text{total number of possible outcomes}}$
Sample Space	All the possible outcomes of an experiment.
Sample Point	Just one of the possible outcomes

Random	When something happens without being made to happen on purpose.
Fair	Treated equally, without having an advantage or disadvantage.
A fair game	Is a game in which there is an equal chance of winning or losing.
A fair coin	is a coin that has equal probability of falling on a "head" or a "tail" when it is tossed.
Descriptions of the likelihoo d of an event occurring:	
• **Impossible**	– it has no chance of happening
• **Unlikely**	– it has a greater chance of not happening than of happening – it has as much chance of happening as of not happening.
• **Even (equally likely)**	– It is equally likely to happen as to not happen.
• **Likely**	– **it** has a greater chance of happening.
• **Certain**	– it is certain that it will happen.
Compound events	are two or more events happening at once.
Independent events	are events such that the probability of one event occurring in no way affects the probability of the other event occurring.
Dependent events	Events are dependent if the occurrence of either event affects the probability of the other.
Mutually Exclusive	means we can't get both events at the same time. (It is either one or the other, but **not both)**

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

2. Structure of the question papers

PAPER 1	PAPER 2
Finance 60% (±5) Data Handling 35% (±5) Probability 5% Including Growth Charts (CAPS page 65) assesses application of measures of spread in data handling.	'Maps, plans and other representation of the physical world 40% ((±5) Measurement 55% (±5) Probability 5% Including ±5% (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 1:30 marks ± 5 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. **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.	**Question** 1:30 marks ± 5 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.
N. B: EACH PAPER MAY HAVE 4 OR 5 QUESTIONS	

QUESTION 1

1.1 Thandi is a junior administration clerk at New Horizon Admin Services. She receives her monthly salary advice every month from her employer. TABLE 1 below shows her monthly salary advice she receives.

TABLE 1: THANDI'S MONTHLY PAYSLIP

COMPANY: New Horizon Admin Services

EMPLOYEE: Ms. T. Khumalo | ID: 950512 * 081***

PAY PERIOD: 01/03/2026 to 31/03/2026

EARNINGS	AMOUNT (R)	DEDUCTIONS	AMOUNT (R)
Basic Salary	14 500	PAYE (Income Tax)	1 150
Housing Allowance	1 200	UIF (1% of Gross)	**A**
		Medical Aid	950
GROSS INCOME	**15 700**	**TOTAL DEDUCTIONS**	**….**
		NET SALARY	**R13 443**

[Source_Adapted_from_https://phpayslip.co.za/]

Use TABLE 1 and the information above to answer the questions that follow.

1.1.1 Explain the term *Gross income* in the given context. (2)

1.1.2 Identify the name of Thandi's employer. (2)

1.1.3 Calculate the value of **A**, the monthly UIF deduction for Ms. Thandi Khumalo. (2)

1.1.4 Determine Thandi's monthly total deductions. (2)

1.1.5 Ms. Thandi Khumalo states that she should be paying R124,25 less in monthly income tax because she has a direct monthly deduction of R364 for a medical aid tax credit, which is owed to SARS.

TABLE 2: SARS EXTRACT TAX TABLE 2026/2027 TAX YEAR

TAXABLE INCOME (R)	RATES OF TAX
1 – 237 100	18% of taxable income
237 101 – 370 500	R42 678 + 26% of taxable income above R237 100
Tax Rebates (Primary): R17 235 per year.	

[Source: https://www.sars.gov.za/]

Verify, showing ALL calculations, whether her statement is valid by calculating her new monthly tax. (7)

1.2 Ms. T. Khumalo is reviewing her finances at the end of March. She noticed that the "Net Salary" on her payslip does not match the amount deposited into her bank account. She is also planning to save R5 850 to buy herself a laptop for the upcoming month.

Table 3 below shows a part of her bank statement. Some of the values have been omitted.

BANK: Standard Savings Bank | **ACCOUNT:** 10123456789
CLIENT: Ms. T. Khumalo | **STATEMENT DATE:** 01/04/2026

DATE	DESCRIPTION	TYPE	AMOUNT (R)	BALANCE (R)
24/03	Balance Brought Forward			745,00
25/03	Salary: New Horizon	Cr	13 455,00	14 200,00
27/03	Debit order: city rentals	Dr	4 800,00	9 400,00
28/03	Atm cash withdrawal	Dr	1 000,00	8 385,00
30/03	POS purchase: Supermart	Dr	620,00	7 765,00
31/03	Service fee	Dr	115,00	**7 650,00**

[Source: adapted from_ https://pdfsimpli.com/]

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

1.2.1 Explain the meaning of *balance brought forward* in the given context. (2)

1.2.2 On 28/03, the statement shows an ATM withdrawal of R1 000, resulting in a balance of R8 385.
Determine the hidden bank fee charged for this specific withdrawal. (3)

1.2.3 Calculate the simplest ratio form of the service fee to the salary deposit. (2)

1.2.4 Determine the total amount of all debit transactions for the period shown. (2)

1.2.5 Ms. Khumalo decides to save 12% of her April salary (assuming her salary remains R13 455.00). She adds this 12% saving to 50% of her closing balance as of 31/03.

Determine whether she will have enough money to buy the laptop in cash on 1st May.

show all calculations to support your answer. (5)

1.2.6 Name ONE disadvantage of Thandi for withdrawing large amounts of cash from an ATM. (2)

1.3 Ms Khumalo is considering moving out of her rented apartment and buying the property at Willow Creek Municipality.

Below is the municipality's monthly bill from one of her friends, whom she used to calculate her monthly total municipality costs.

TABLE 4: MUNICIPALITY ACCOUNT STATEMENT FOR THE MONTH.

Account Number: **** 9921 008 | **Statement Date:** 25 April 2026 **Property Address:** 14 Protea Lane, Willow Creek | **Market Value:** R 850 000.00			
Service Description	**Consumption / Units**	**Rate per Unit**	**Amount (R)**
Property Rates	R 850 000	0,00685 (Annual)	485,21
Water (Step 1: 0 - 6 kl)	6 kl	R 0,00 (Free)	0,00
Water (Step 2: 7 - 15 kl)	9 kl	R 22,45	202,05
Electricity (pre-paid)	350 kWh	R 2.15	**(A)**
Refuse Removal	Fixed Monthly Rate		158,30
Sewerage	Fixed Monthly Rate		185,00
SUB-TOTAL			**(B)**
VAT @ 15%			**R267,46**
Previous Balance	**Payments Received**	**Current Charges**	**Total Amount Due**
R 1 250,50	- R 1 250,50	**(B)**	**(C)**

[Source : https://www.citizen.co.za/]

Note: Current Charges (Excl. VAT).

Use TABLE 4 and the information above to answer the questions that follow.

1.3.1 Show by calculations how the property rates amount of R485,21 was determined. (3)

1.3.2 Calculate the missing value **A**, the total cost of pre-paid electricity. (2)

1.3.3 Determine the value of B, the current charges, in the subtotal of the Monthly bill. (3)

1.3.4 Ms. Khumalo currently pays R4 800.00 for rent. If her new monthly bond (home loan) repayment for this house is R6 200.00.

She claims that the difference between her estimated total monthly housing cost and her current rent would be less than R4 450,52.

Verify showing ALL calculations, whether her claim is correct. (6)

1.4 Mandla Ntuli is a 34-year-old manager living in Richards Bay, KwaZulu-Natal. He has always been proud of his high credit limit, which he used to renovate his family home in the Mandlazini Reserve.

However, over the last few months, a series of unexpected events has turned his credit card into a major financial burden.

ANNEXURE A shows the interim statement for Mandla Ntuli from his credit account.

PICTURE OF THE RENOVATION FOR MANDLA'S HOUSE

[source: https://www.jaobk.co.za/]

Use ANNEXURE A to answer the questions that follow.

1.4.1 Explain what is meant by the term *Arears* in the given context. (2)

1.4.2 Mandla's balance increased from R236 245.82 to R252 025.63. Calculate the percentage increase in his debt over this one month. (3)

1.4.3 Use the opening balance to show by calculations how the balance of R239 218,45 was determined on the date of 14/02/2026. (3)

1.4.4 Write down the number of days the statement period covers. (2)

1.4.5 Determine the probability as a percentage of Mandla Ntuli withdrawing R10 000. (2)

1.4.6 Calculate the total amount of transfers on the interim statement. (2)

1.4.7 Mandla Ntuli pays R900,83 insurance for his loan amount. Give ONE possible reason for paying the insurance on the credit account. (2)

1.4.8 Mandla performed two transfers totaling R18,000.00. If he had not made these transfers, calculate the closing balance as of 28 February 2026. (2)

1.4.9 Explain the impact of paying extra payments towards the credit account. (2)

1.4.10 Calculate the total amount Mandla spent on non-interest fees for this period (3)

1.4.11 Identify the purpose of the decimal point and the comma in the balance of R236,245.82, and explain how this formatting helps the client avoid errors when reading their statement. (2)

QUESTION 2

2.1 Mr Rohit, a consultant from Durban, is travelling to the United States (USA) for a 10-day business conference. He needs to exchange South African Rand (ZAR) for US Dollars (USD).

Table 1 below indicates the exchange rates at NMB in April 2026 and the information about his trip.

TABLE 5: EXCHANGE RATES AT "NMB" (APRIL 2026)

	ZAR PER UNIT	
Currency	**Bank Sells (You Buy)**	**Bank Buys (You Sell)**
US Dollar ($)	R19,12	R18,45

- **Bank Commission:** 2,1% of the total Rand value (charged on both buying and selling).
- **Conference Fee:** $850,00 (payable in USD).
- **Daily Allowance:** $120,00 per day (for 10 days).

[Source : https://www.thebalancemoney.com/]

Use TABLE 5 and the information above to answer the questions that follow.

2.1.1 Write down the bank's selling exchange rate in units per ZAR. (3)

2.1.2 Calculate the total amount Mr. Rohit will need for the conference in dollars. (3)

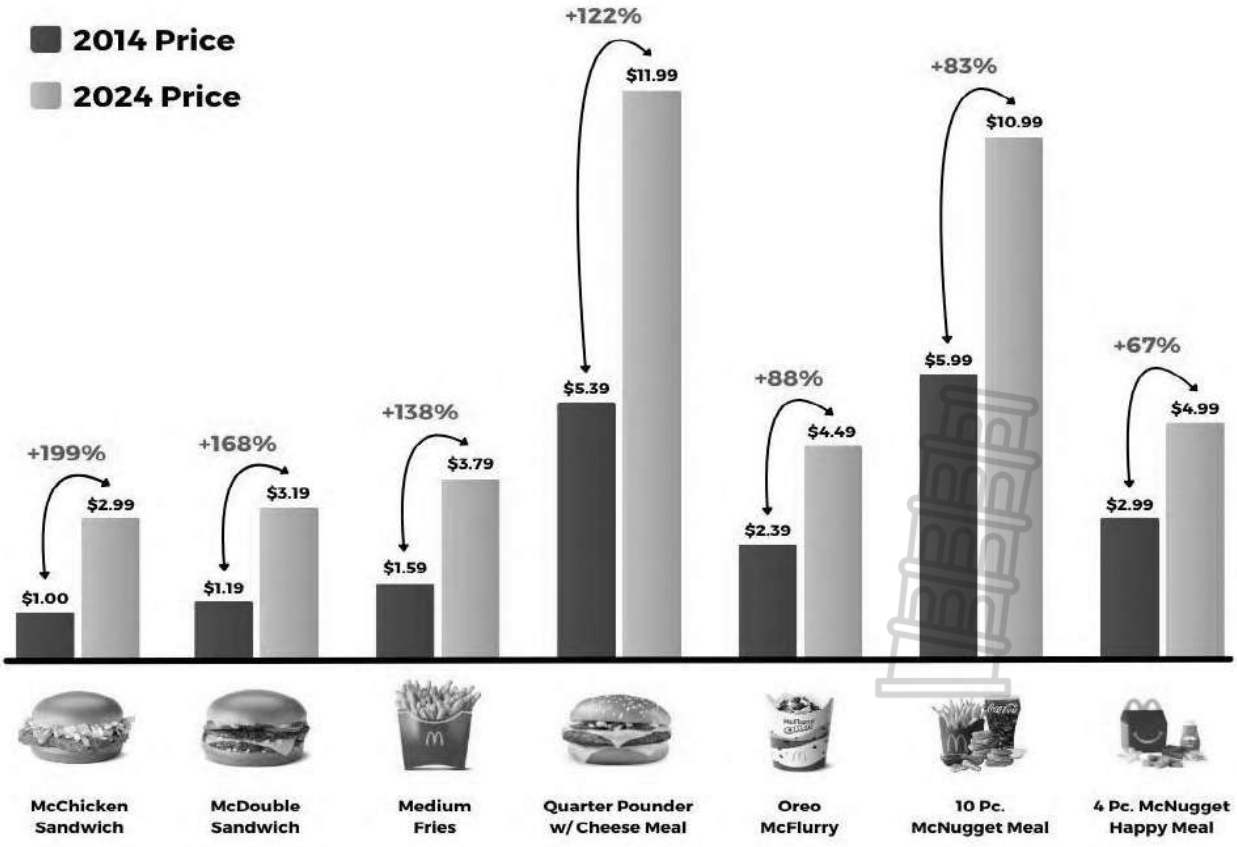
2.1.3 Convert the total amount he needs for the 10-day conference into South African Rands. (2)

2.1.4 Determine the commission fee that 'NMB Bank's Mr. Rohit will charge for this transaction. (2)

2.1.5 Calculate how much Mr. Rohit will receive in Rands after paying out the commission to the bank. (2)

2.1.6 Calculate the difference between the bank selling rate and the bank buying rate. (2)

2.2 The bar graph below compares prices in 2014 and 2024 US Dollars for various McDonald's menu items.



[source: https://nypost.com/]

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

2.2.1 Identify the item that has experienced the highest percentage increase over the 10 years. (2)

2.2.2 Calculate the total amount you will spend in dollars for a 10 Quarter Pounder with cheese order Meal 2024. (2)

2.2.3 Show by calculations how the percentage change of medium fries was determined between 2014 and 2024. (3)

2.2.4 The manager at McDonald's states that a customer will pay exactly $6,00 to buy three "McDouble Sandwiches" in 2024. Verify this statement by comparing it to what they would have paid for the same order in 2014 (4)

2.2.5 If the exchange rate in 2024 is $1 = R18.50, calculate the South African Rand (ZAR) cost of a "10 Pc. McNuggets Meal" in 2024 (2)

2.2.6 Suggest ONE possible reason why a fast-food company would increase prices by over 100% in 10 years. (2)

2.2.7 Calculate the projected cost of an Oreo McFlurry in 2034, assuming it increases at the same inflation rate over the next 10 years. (3)

[32]

QUESTION 3

3.1 Langa invested a principal amount 28 months ago, and the investment has now grown to a total of R23 125,26**.**

ACBT Bank offered him an interest rate of 8% per annum**,** compounded semi-annually during the first year. After the first year, the interest rate increased to 9% per annum**,** compounded quarterly for the remaining period of the investment.

Use the information above to answer the questions that follow.

3.1.1 Differentiate between the terms *compounded half-yearly* and *compounded quarterly*. (2)

3.1.2 Calculate the interest rate that ACBT Bank applied to Langa's investment during the first six months. (2)

3.1.3 Langa claims that the principal amount he invested 28 months ago was R20 000**.**

Verify whether his claim is correct by showing ALL the necessary calculations**.** (7)

3.1.4 Determine the total interest that Langa earned from the investment. (2)

3.1.5 Explain the advantage of choosing *compound interest* option in comparison with *simple interest*. (2)

3.2 Table 1 below shows the cash withdrawals bank fees structure from ACBT bank received by Langa.

TABLE 1: WITHDRAWAL SERVICE FEES FROM ACBT BANK

[Source: Adapted from_ https://www.fnb.co.za/]

CASH WITHDRAWALS	
ATM	R1,25 plus R7 per R20 or part thereof
Other bank ATM	R6 per R500 or part thereof
Branch/Over the counter	R15 plus **P** of value

Use TABLE 1 above to answer the questions that follow.

3.2.1 Langa withdrew R8 320 from an LKBC Bank ATM.

Calculate the banking fees charged for this withdrawal. (3)

3.2.2 The banking fee charged for a withdrawal at an ACBT Bank ATM was R337,25**.**

Calculate the amount of money that was withdrawn. (5)

3.2.3 Langa stated that the percentage rate (P) charged for cash withdrawal fees at the branch is 0.35%**.**

Verify, by showing your calculations, whether his claim is correct if the bank charged a withdrawal fee of R20,46 for a withdrawal of R1 560 at the branch. (5)

3.3 Peter is a first-year university student. All students have been instructed by the institution to buy laptops. He is interested in purchasing a silver HP 255 G10 AMD Ryzen 3 7330U 8GB/512GB SSD laptop.

Cash price	**Period**	**Instalment**	**Deposit**
R 7999	1st half yearly	R1 600	5%

[Source:https://bash.com/]

Use the information above to answer the questions that follow.

3.3.1 Calculate the deposit required for the laptop. (2)

3.3.2 State **ONE** advantage of using the hire purchase method to buy a laptop. (2)

3.3.3 Determine the final amount Peter will pay, if he chooses the hire purchase method option including deposit. (3)

3.3.4 Calculate the interest rate if Peter choses the hire purchase option. (4)

3.4 Sibusiso is a billionaire who owns several fuel stations. He decided to treat himself by buying the latest version of the Ford Raptor.

The picture below shows the model he purchased in 2026: The Ford Raptor 3.0 V6 EcoBoost**,** automatic, petrol, armoured, with a fuel consumption of 11.5 litres per 100 km**.**

Cash price	Instalment	Interest	Period	Deposit	Balloon payment
R2 599 900	R47 841	10.25%	6 years	35%	R1 429 945

PICTURE OF FORD RAPTOR 3.0

[*Source:*https://armouredmobility.co.za/]

Use the information above to answer the question that follow.

3.4.1 Calculate the percentage of the balloon payment for the Ford Raptor. (2)

3.4.2 Sibusiso claims that he will pay approximately R4 350 000**,** rounded to the nearest R50 000**,** if he buys the car using the hire purchase method.

Verify, by showing ALL calculations**,** whether his statement is correct.

You may use the following formula:

(4)

Hire purchase = Deposit + (number of monthly instalments).

3.4.3 Sibusiso can choose to pay R42 000 per month using the balloon payment option. Calculate the total interest he will pay if he selects this option.

You may use the following formula:

(5)

Hire purchase = Balloon payment + (number of monthly instalments).

3.5 Adam works in the Eastern Cape and has recently been promoted to a management position in Durban. He plans to buy a property in Durban valued at R1 230 000. He has decided to pay a 20% deposit on the house.

BTY Bank has offered him a home loan with an interest rate of 10.75% per annum for 20 years, together with a monthly service fee of R69.

PICTURE OF THE HOUSE

[Source: https://www.myroof.co.za/]

Use the information above to answer the questions that follow.

3.5.1 Determine the total service fees over the period of 20 years. (2)

3.5.2 Calculate the total loan amount Adam will need to borrow to buy the house, including the total service fees. (4)

3.5.3 Adam plans to pay a monthly repayment of R9 255,18 for the house.

Determine the loan factor that was used to determine his bond repayment.

You may use the following formula:

Monthly repayment = (Loan amount × Loan factor) ÷ 1000. (4)

[60]

COST PRICE & SELLING PRICE, PROFIT/LOSS AND INCOME AND EXPENDITURE

QUESTION 4

4.1 Thoko is a fashion designer who makes and sells modern traditional clothing. Her target market is Maskandi artists and their fans. She designs Brentwood trousers and sells them at a profit.

She spent R9 504 on electricity, rent, and transport. She sells each pair of Brentwood trousers for R1 488**.**

PICTURE BELOW SHOW MODELS WEARING BRENTWOOD PANTS

[*Source:https://brandzz.co.za/*]

Use the above information to answer the questions that follow.

4.1.1 Show, using calculations, that the cost price of each trouser is R960 if it is sold at a 55% mark-up**.** (3)

4.1.2 Write down the equation that Thoko can use to calculate the total cost of producing the Brentwood trousers. (3)

4.1.3 Calculate the number of Brentwood trousers she needs to sell in order to break even.

You may use the following formula: (4)

Number of Brentwood trousers = 9 504 ÷ Profit per Brentwood.

4.1.4 Show, using calculations, whether Thoko will make a profit or a loss if she sells 369 Brentwood trousers**.** (4)

4.2 **TABLE 1** below shows the budget for Non-interest expenditure from 2025-2028.

R million	**2025/26**	**2026/27**	**2027/28**	**MTEF TOTAL**
Non-interest expenditure (2024 Budget)	**1 840 913**	**1 932 982**	**2 030 266**	**5 804 161**
Additions to baselines and provisional allocations[1]	87 337	49 334	43 458	**A**
Infrastructure projects [1]	*7 950*	*13 920*	*11 863*	*33 732*
2025 public-service wage agreement and carry-	*7 317*	*7 842*	**B**	*23 371*
through costs				
Early retirement costs	*2 200*	*3 300*	–	*5 500*
COVID-19 social relief of distress grant	*35 169*	–	–	*35 169*
Social grants above-inflation increases	*1 594*	–	–	*1 594*
SARS baseline allocations	*2 000*	*1 000*	*1 000*	*4 000*
Provisional allocations for frontline services	*12 245*	*13 883*	*15 157*	*41 286*
Other spending additions [1]	*18 862*	*9 388*	*7 227*	*35 476*
Reductions to provisional allocations[2]	-40 817	-16 514	-24 491	-81 822
Changes in contingency reserve	-2 600	-9 000	-9 708	-21 307
Technical adjustments[3]	-448	**C**	-1 412	-2 645
Revised non-interest expenditure (2025 Budget)	**1 884 384**	**1 956 019**	**2 038 112**	**5 878 515**
Change in non-interest expenditure from	43 472	23 036	7 846	74 354
2024 Budget				

[*Source: https://www.treasury.gov.za*]

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

4.2.1 Determine the missing values **A**,**B** and **C** from the 2026 budget. (6)

4.2.2 Write down the MTEF total Revised non- interest expenditure in words. (2)

4.2.3 Calculate the SARS baseline allocation for 2025/26 as a percentage of the revised non-interest expenditure budget for 2025/26. (3)

4.3 The **TABLE 2** below shows consolidated fiscal framework from 2022-2029.

CONSOLIDATED FISCAL FRAMEWORK							
R billion/percentage of GDP	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29
	Outcome			Estimate	Medium-term estimates		
Revenue	1902.4	1950.2	2053.8	2231.7	2345.4	F	2612.7
	A	27.4%	27.8%	28.8%	28.6%	28.6%	28.8%
Expenditure	2146.6	2256.7	B	2578.9	2669.7	2768.1	2893.4
	31.7%	F	32.3%	33.2%	32.6%	32.1%	31.9%
Budget balance	-244.2	-306.5	-336.0	-347.2	E	-300.8	-280.7
	-3.6%	-4.3%	-4.5%	D	-4.0%	-3.5%	-3.1%
Gross domestic product	6768.2	7114.4	7398.9	7756.7	8188.1	8615.1	C

Use Table 2 below to answer the questions that follow.

4.3.1 Write down the value of Revenue outcome for 2024/25 in numerals. (2)

4.3.2 Determine value of **A**, the Revenue Outcome percentage. (3)

4.3.3 Calculate the value of **B**, the Outcome expenditure for 2024/2025. (3)

4.3.4 Determine the value of **C** Medium-term estimates 2028/29, the Gross domestic product if the inflation for 2027/28 is 5.36% (3)

4.3.5 Calculate the value of **D** the percentage deficit for 2025/26. (3)

4.3.6 Determine the value of **E,** the Budget balance 2026/27 medium-term estimates. (3)

4.3.7 Calculate the value of **F,** the Revenue for 2027/28 Medium-term estimates. (3)

4.4 **ANNEXURE A** shows the consolidated government expenditure for 2025/2026

Use **ANNEXURE A** to answer the questions that follow.

4.4.1 Determine the Total economic development budget. (3)

4.4.2 Determine the Total health budget if District Health accounts for 44.4% of the total. Give your answer rounded to one decimal place. (4)

4.4.3 Why is there a need to allocate funds for human settlements, water, and electrification programmes? Give **TWO** reasons. (4)

4.4.4 Calculate the Provincial hospital allocation **J** and express your answer as a percentage of the Total health department budget. (4)

4.4.5 Determine the value of **K** for Public administration and fiscal affairs, given that external affairs account for 10.9% of general public services.. (5)

4.4.6 Write the simplified ratio of Home Affairs to Defence and State Security. (3)

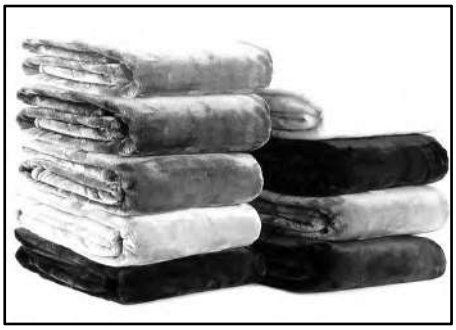
4.5 In June 2024 a Tornado hit the small town of Tongaat causing major damage to schools, homes, roads and infrastructure. More than 7000 homes were damaged and 1200 families became homeless.

Warm hugs, is a small business based in Durban and they manufactured and sold blankets in bulk to organisations that were assisting communities whose homes were damaged during the tornado.

The fixed monthly costs to run this business is R 1000 for rent and R 750 each for two workers to run the machines.

It costs R 120 to manufacture each blanket.

PICTURE OF BLANKETS



[https://www.makro.co.za/]

Use the information above to answer the questions that follow.

4.5.1 Calculate the total fixed monthly cost incurred by the business. (2)

4.5.2 **TABLE 3** below shows the income and expenses of the blanket business.

Use the table and answer the questions that follow:

TABLE 3 : INCOME AND EXPENSES OF THE BLANKET BUSINESS

No. of blankets	0	10	20	50	70	100
Expenses	**A**	3700	4900	**C**	10900	14 500
Income	0	1700	**B**	8500	11 900	17 000

a) Determine the income from the sale of **ONE** blanket. (2)

b) Calculate the profit made on one blanket, excluding the fixed monthly cost. (2)

c) Calculate the missing values **A, B** and **C**. (3)

4.5.3 The graph of the income is drawn on the SPECIAL ANSWER SHEET provided. On the same axes, draw the graph of the expenses. (3)

4.5.4 Define the term *break-even* based on the given context, and state the coordinates of the break-even point from the scenario above. (2)

4.6 **ANNEXURE B** presents the Statement of Financial Position of Renosterberg Local Municipality as at 30 June 2025.

Use **ANNEXURE B** to answer the questions that follow.

4.6.1 Calculate the percentage change in the Investment property between the 2024 and 2025 financial positions.

You may use the formula:

$$\% \text{ change} = \frac{New - Old}{Old} \times 100$$ (3)

4.6.2 Determine the unit form ratio of the 2025 Employee benefits to the 2024 restated Other financial liabilities. (3)

4.6.3 Determine the value of **G**, which represents the Consumer deposits for 2025. (3)

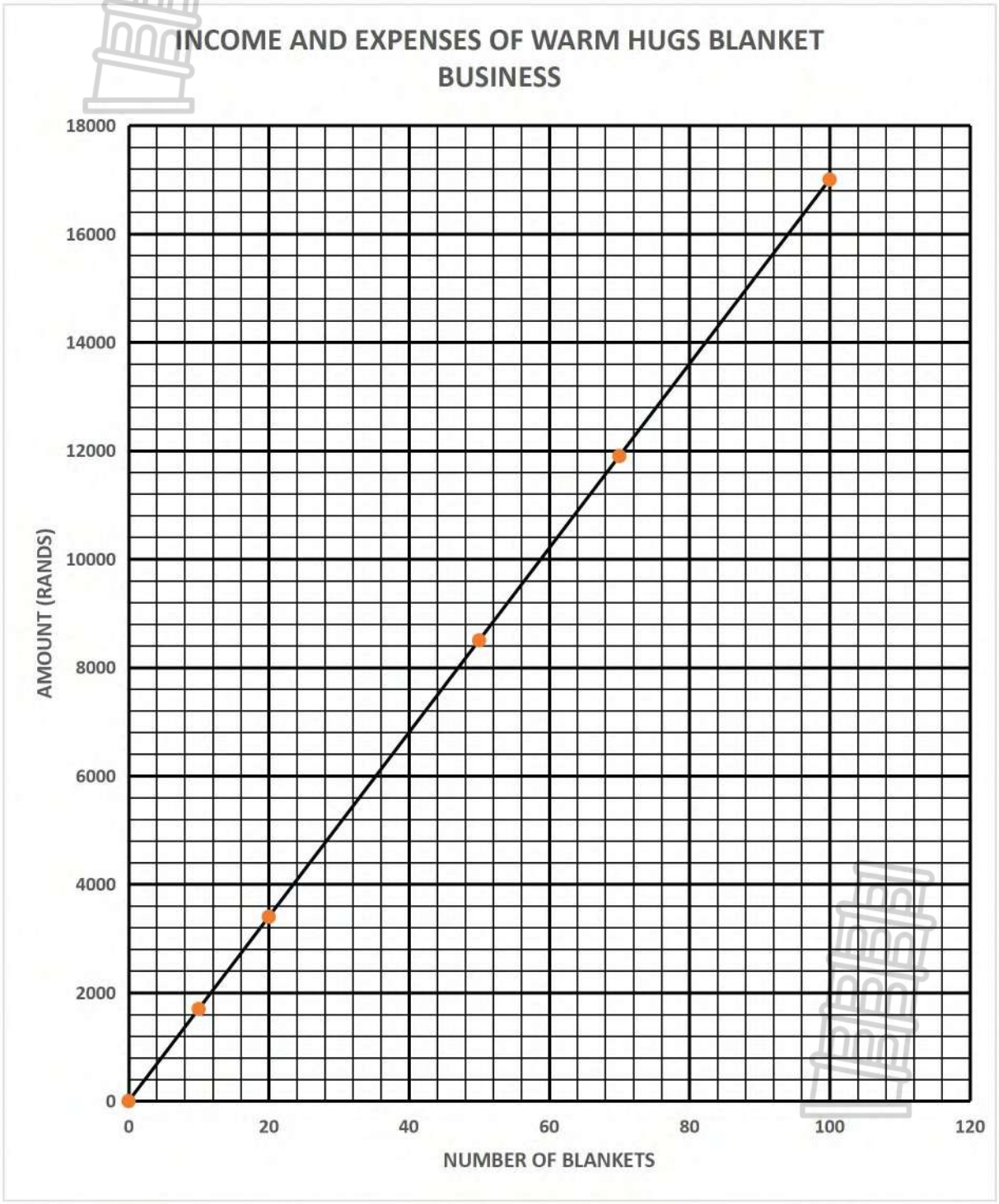
4.6.4 Explain why the 2025 Financial obligation for the lease is nil. (2)

[90]

ANNEXURE A

[Source: https://www.treasury.gov.za/]

SPECIAL ANSWER SHEET



ANNEXURE B

Renosterberg Local Municipality

Annual Financial Position for the year ended 30 June 2025

Statement of Financial Position as at 30 June 2025

Figures in Rand	Note(s)	2025	2024 Restated*
Assets			
Current Assets			
Inventories	3	11 448	24 486
Receivables from non-exchange transactions	5	1 544 935	746 390
VAT receivable	6	19 723 962	11 159 233
Consumer receivables from exchange transactions	7	7 608 090	3 217 730
Cash and cash equivalents	8	14 441 312	830 545
		43 329 747	**15 978 384**
Non-Current Assets			
Investment property	9	44 690 839	41 606 999
Property, plant and equipment	10	445 857 926	441 629 801
Intangible assets	11	7 226	12 999
		490 555 991	**483 249 799**
Total Assets		**533 885 738**	**499 228 183**
Liabilities			
Current Liabilities			
Other financial liabilities	50	104 816 713	68 213 544
Finance lease obligation	12	1 400 000	7 515 943
Payables from exchange transactions	13	69 868 486	64 853 918
Accruals and other liabilities		27 307 855	22 009 403
Consumer deposits	14	G	1 038 708
Employee benefit obligation	15	313 387	686 000
Unspent conditional grants and receipts	16	16 732 936	49 613
Provisions	17	1 902 695	22 927 957
		161 500 589	**148 548 051**
Non-Current Liabilities			
Other financial liabilities	50	79 599 198	68 213 544
Finance lease obligation	12	-	1 400 000
Employee benefit obligation	15	1 699 028	1 863 000
Provisions	17	13 075 205	13 075 205
		94 373 431	**84 551 749**
Total Liabilities		**255 874 020**	**233 099 800**
Net Assets		**278 011 718**	**266 128 383**
Accumulated surplus		278 011 718	266 128 383
Total Net Assets		**278 011 718**	**266 128 383**

[Source:https://lg.treasury.gov.za/]

Question 5

5.1 Ntombi is a South African pastry chef who recently opened an international bakery. She uses recipes from both South Africa and the United States. She needs to ensure all measurements are precise to maintain the quality of her baked goods.

Picture of Pastry Chefs

Use the following conversions and formulae where necessary:

1 pound (lb) = 0,4536 kg

1 US Gallon = 3,785 litres

1 litre = 1000 cm^3

5.1.1 Ntombi buys a bag of organic farm flour from the USA labelled 5 lbs. Convert this mass to kilograms. (2)

5.1.2 A cake recipe requires 750 ml of milk. Express this quantity in litres. (2)

5.1.3 Ntombi imports a specialty oven from America. The manual states the baking temperature for muffins is 375°F. Calculate the equivalent temperature in degrees Celsius (°C). Round your answer to the nearest 10.

You may use the formula: **°C = (°F - 32°) ÷ 1,8** (3)

5.1.4 A rectangular cake tin has a volume of 4500 cm^3. Calculate how many litres of batter (mixture of flour, eggs, and milk/water) are needed to fill this tin completely. (3)

5.1.5 Ntombi needs to make a giant wedding cake. Constructing a giant cake from standard-size cakes is a common technique that allows bakers to create large, stable, and intricately designed centrepieces without needing oversized, specialized baking pans or industrial-sized ovens. The recipe for one standard cake requires 2,2 lbs of butter. She needs to make 8 of these cakes. Butter is sold in 500 g bricks in South Africa. Calculate the (6)

minimum number of 300 g bricks she must buy.

5.1.6 Ntombi is comparing two suppliers for milk:

Supplier A (Local): R18,50 per 1-litre carton.

Supplier B (Import): $5,50 per 1 US Gallon.

(Use the exchange rate: $1 = R19,10)

By calculating the price per litre for both suppliers, advise Thandi on which supplier is more cost-effective. (5)

5.1.7 A recipe from the UK uses pints **(1 litre ≈ 1,76 pints)**. Ntombi argues that if she has 5 litres of milk, she has more than 9 pints. Use calculations to verify if her statement is correct. (3)

5.2

Andrew is the logistics manager for the South African Olympic team as they prepare for their trip to Paris. His responsibilities include overseeing athlete nutrition and managing the transport of equipment supplied by international sponsors. In addition, Andrew is tasked with setting up a medical and recovery station for the team. He has been allocated a wooden floor space and a range of international equipment. His role is to ensure that the station is safe, well-organized, and adequately stocked to meet the needs of the athletes.

Picture of the South African Olympic team

Conversion and Reference Data:

1 pound = 0,4536 kg

1 US Gallon = 3,785 litres

°C = (°F – 32) ÷ 1.8

I inch = 2,54 cm

1 fluid ounce (fl oz) = 29,57 ml

Medical Note: Normal body temperature is 37°C. A "High Fever" is any temperature above 39.4°C. A high fever usually requires hospital emergency care if it reaches 40°C.

5.2.1 Andrew needs to measure the width of the recovery room in order to fit a physiotherapy table. Which measuring instrument would be more appropriate: a 30 cm ruler or a 5 m (2)

tape measure? Provide a reason for your choice.

5.2.2 The physiotherapy table is 75 inches long. A protective floor mat is 1,85 metres long. By calculating the length of the table in metres, determine which is longer: the table or the mat? (4)

5.2.3 Andrew is mixing a concentrated disinfectant for the equipment. The instructions require 4,5 fluid ounces (fl oz) of disinfectant to be mixed into a 10 litres bucket. Calculate the required amount of disinfectant in millilitres (ml). (2)

5.2.4 If Andrew uses a measuring jug with 50 ml interval markings (e.g., 50, 100, 150...), to which mark should he pour the liquid to be as accurate as possible without going under the required amount? (2)

5.2.5 An athlete arrives at the training facility, feeling dizzy. The team's nurse takes their temperature using an American-made digital thermometer, which reads 104,1°F. Determine if the nurse should call for an emergency ambulance or simply give the athlete water and rest? Justify your answer by using calculations. (3)

5.2.6 The recovery room floor is a rectangle measuring 4,2 m by 3,5 m. Andrew needs to cover the floor with specialized rubber grip-carpeting. The carpet is sold in "Running Metres" from a roll that is 2 metres wide. Calculate the minimum number of Running Metres Andrew must buy to cover the entire floor. (4)

5.3 Andrew is overseeing the construction of a new "High-Performance Hub" for the South African Olympic team. The project includes a circular recovery pool, a rectangular training hall, and a gravel walkway.

Adapted: https://www.promeai.pro

Perimeter of a rectangle = 2(length + width)

5.3.1 Define the term *perimeter* in the given context. (2)

5.3.2 The circular recovery pool has a diameter of 4,5 metres. Determine the radius of the pool. (2)

5.3.3 The circular pool (radius = 2,25 m) must be filled with water to a height of 1,8 metres. Calculate the Volume of water in the pool in m^3

You may use the following formulas:

$V = \pi \times radius^2 \times height$, where $\pi = 3.143$) (3)

5.3.4 Andrew looks at the price of gravel for the walkway in the table below:

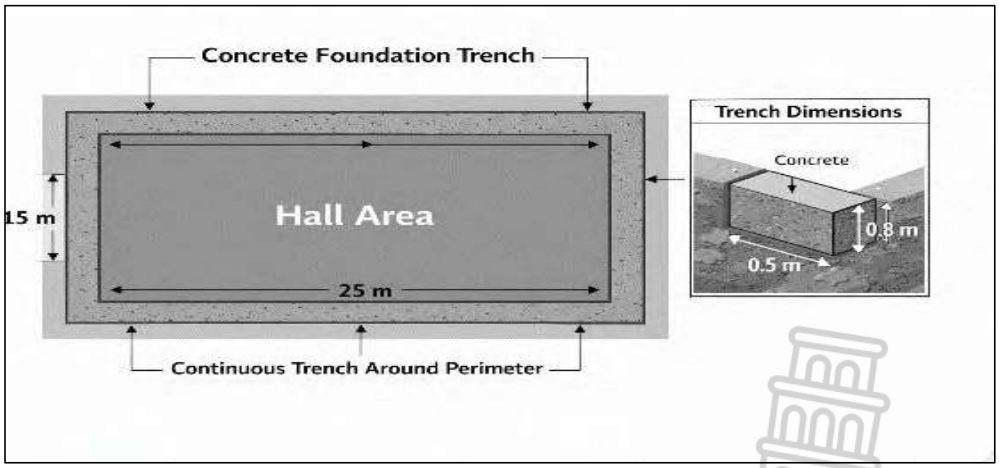
Area to cover (m^2)	10	20	30	40
Cost of Gravel (Rand)	1 500	3 000	4 500	6 000

(4)

Describe the relationship between the Area to be covered and the Cost of gravel by using the table above and then determine the formula to describe this relationship.

5.3.5 Use the relationship in 5.3.4 to calculate the cost to cover 55 m^2 area. (2)

5.3.6



Adapted: http://www.archivinci.com

Andrew needs to pour a concrete foundation for the hall's walls.

The hall is 25 m long and 15 m wide. The foundation trench is 0,5 m wide all around and 0,8 m deep.

The concrete is poured only under the perimeter of the walls. (5)

Calculate the total volume of concrete (in m^3) required for the foundation trench.

You may use the formula: **V = length × width × depth**

5.3.7 Andrew intends to paint the interior walls of a hall measuring 25 m by 15 m, with wall heights of 3 metres. The hall contains two doors, each measuring 2 m by 1 m, and four

windows, each measuring 1,5 m by 1 m, which are excluded from the painting area. The paint has a coverage rate of 8 m² per litre and is sold in 5-litre tins at a cost of R649,00 per tin. Andrew has a budget of R5 500. **(10)**

Determine, with appropriate calculations, whether this budget is sufficient to paint the walls with two coats of paint.

5.4 Mr Samuel's daughter, Kim invited two of her friends, Zara and Tamara over for afternoon tea. She decided to make Turkish Flat Bread for five people.
Refer to an extract of the recipe on **ANNEXURE A** and answer the questions that follow:

5.4.1 Convert the cooking time to hours. (2)

5.4.2 Convert the amount of kosher salt needed, in ml, to serve ten people. (2)

5.4.3 Calculate the minimum temperature in degree Celsius of the $1\frac{1}{4}$ cups of water needed for the recipe. (2)

You may use the formula: $℃ = (°F - 32) \div 1.8$

5.4.4 Kim claims that she would need more than $500\ ml$ of flour to make enough Turkish Flat Bread for the five of them. Verify whether her claim is correct.
Note : 1cup = 250ml (4)

5.4.5 Write down the quantities of calcium to sodium as ratio in its simplest form. (2)

ANNEXURE A

Turkish Flat Bread (Bazlama)

This delicious, pillowy soft Turkish Flatbread is an easy, one-bowl-no-mixer recipe. It's perfect with hummus, tabouli, for wraps and more!

Prep Time	Cook Time	Total Time
35 mins	25 mins	1 hr

★★★★★
4.86 from 75 votes

Course: Breads Cuisine: Turkish Keyword: Turkish Flatbread
Servings: 10 Calories: 209kcal Author: Chris Scheuer

Ingredients

- 1 ¼ cups warm water 105-110°F
- 2 ¼ teaspoons active dried yeast 1 packet
- 1 tablespoon sugar
- ¾ cup Greek-style yogurt
- 2 tablespoon extra virgin olive oil
- 2 teaspoons kosher salt
- 3 ¾ cups all-purpose flour
- ¼ cup finely chopped flat leaf parsley

NUTRITIONAL INFORMATION : Turkish Flat bread			
Calories : 209kcal	Carbohydrates : 38g	Protein : 6g	Fat: 3g
Saturated fat : 0,5g	Polyunsaturated fat 0,5g	Monounsaturated fat:0,5g	Transfat : 0,001g
Potassium : 71mg	Fiber : 1g	Sugar:2g	Vitamin A:1IU
Cholesterol : 1mg	Sodium : 472mg	Calcium : 24mg	Iron : 2mg

5.5 Study the information of the three friends below:

NAME OF GIRLS	**HEIGHT**	**WEIGHT**	**BMI**
Kim	156 cm	A	19.7 kg/m^2
Zara	1.72 m	51 kg	B
Tamara	1.55 m	63 kg	26.2 kg/m^2

Weight Status according to BMI:

BMI (kg/m^2)	**Weight Status**
Less than 18.5	Underweight
From 18.5 *to* 24.9	Normal weight
From 25 *to* 29.9	Overweight
More than 29.9	Obese

Use the information above to answer the following questions:

5.5.1 Write down the weight status of Tamara. (2)

5.5.2 Determine the value of A, Kims weight (3)

5.5.3 Calculate the BMI of Zara (B).

You may use the formula: $BM8I = \frac{weight\ in\ kg}{(height\ in\ m)^2}$ (3)

5.6 Baby growth charts are used by paediatricians, nurses and parents to track the growth of infants, children and adolescents.

When her children were little, Tara, a paediatrician used the baby growth chart shown on **ANNEXURE A** to track their progress.

Refer to the baby growth chart and answer the questions that follow:

5.6.1 A 2 year old baby girl has a weight of 11,5kg. State the percentile she falls in. (2)

5.6.2 Explain what the answer in 5.6.1 means. (2)

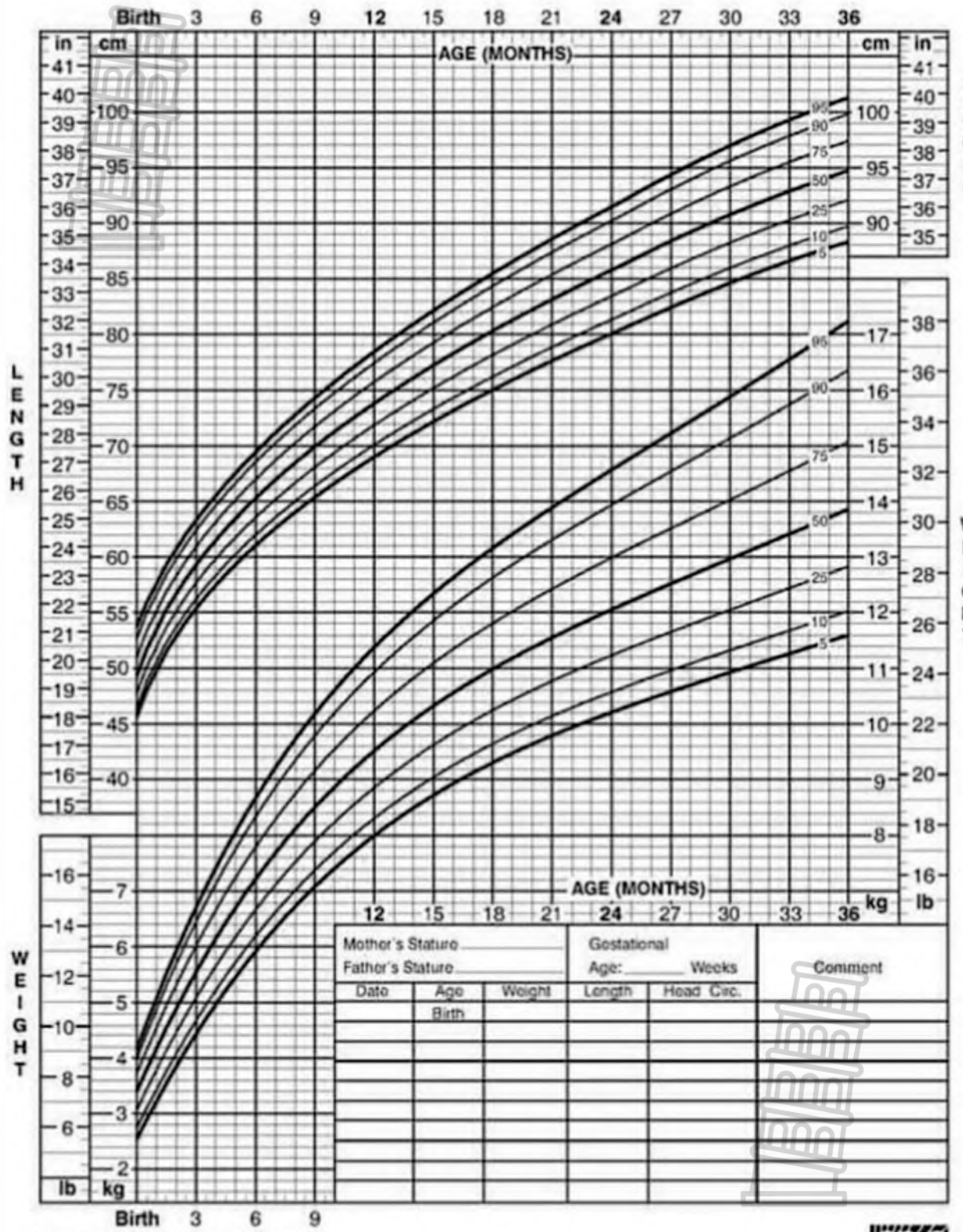
5.6.3 Calculate the difference in mass of an 18 month old girl that lies on the 75th percentile and an 18 month old girl that lies on the 25th percentile. (4)

5.6.4 Determine the length (in cm) of a 30 month old girl that is on the 50th percentile. (2)

Birth to 36 months: Girls
Length-for-age and Weight-for-age percentiles

NAME _____

RECORD # _____



Published May 30, 2000 (modified 4/20/01).
SOURCE: Developed by the National Center for Health Statistics in collaboration with the National Center for Chronic Disease Prevention and Health Promotion (2000).
http://www.cdc.gov/growthcharts

SAFER • HEALTHIER • PEOPLE™

Question 6

6.1 Sipho is the travel coordinator for Team South Africa at the Paris Olympics. He is also responsible for managing the bus schedules between the Olympic Village and the various sporting venues, as well as planning the final cross-country trip for the team's victory parade.

6.1.1 A 100m sprint race lasted 9,79 seconds. Express this time in minutes. (2)

6.1.2 An athlete spends 2 hours and 45 minutes in the gym. Convert this total time to minutes. (2)

6.1.3 Sipho looks at his watch when the first bus leaves. The clock shows 06:15. Write this time in words. (2)

6.1.4 A marathon runner finished the race in 2 hours, 12 minutes, and 40 seconds. Calculate the total duration of the race in seconds. (3)

6.1.5 Define the term *Elapsed Time.* (2)

6.1.6 If a bus departs at 14:30 and the trip takes 45 minutes, at what time does it arrive? (2)

6.1.7 Determine the number of minutes in 0,4 hours. (2)

6.2 For the Olympics Games, a dedicated transport system, The TA System was established specifically for athletes and team officials to move between the Olympic village and competition and training venues. Table 1 below shows the timetable of the bus shuttles from the Village to the stadium.

TABLE 1: BUS SHUTTLE TIMETABLE (VILLAGE TO STADIUM)

Bus ID	Village Departure	Stadium Arrival
B101	07:15	08:05
B102	08:00	08:50
B103	08:45	09:35

6.2.1 Use Table 1 to determine the travelling time of Bus B101 from the village to stadium in minutes. (2)

6.2.2 A swimmer needs to be at the stadium by 09:20 for a warm-up. Which bus is the latest one they can take to arrive on time? (2)

6.2.3 If a bus travels at an average speed of 60 km/h and the stadium is 45 km away, calculate the travelling time in minutes. (3)

6.3 6.3.1 Sipho is planning a victory bus tour from Paris to Lyon. The distance from Paris to Lyon is 460 km. The bus travels at an average speed of 95 km/h. The team must stop for a 45-minute lunch break. They also need a 20-minute stop for refuelling. Calculate the total time the journey will take (including stops). Give your answer in hours and minutes. (6)

6.3.2 The Olympic committee offers two transport options for a 200 km trip:

Option A: A high-speed train that leaves at 10:00, travels at 150 km/h, but has a 30-minute shuttle ride from the station to the venue.

Option B: A direct bus that leaves at 10:00 and travels at a constant speed of 85 km/h.

Sipho needs the team to arrive before 12:15. By calculating the arrival times of both options, advise Sipho on which option is suitable for the team. (7)

[35]

Question 7

7.1 TABLE 1 shows the personal income tax table published by SARS for two tax years.

TABLE 1: PERSONAL INCOME TAX TABLE – 2025/2026 AND 2026/2027

2025/2026		**2026/2027**	
Taxable income in Rands	**Rate of tax in Rands**	**Taxable income in Rands**	**Rate of tax in Rands**
0 - 195 850	18% of taxable income	0 - 245 100	18% of taxable income
195 851 - 305 850	35 253 + 26% of taxable income above 195 850	245 101 - 383 100	44 118 + 26% above 245 100
305 851 - 423 300	63 853 + 31% of taxable income above 305 850	383 101 - 530 200	79 998 + 31% above 383 100
423 301 - 555 600	100 263 + 36% of taxable income above 423 300	530 201 - 695 800	125 599 + 36% above 530 200
		695 801 - 887 000	185 215 + 39% above 695 800
TAX REBATES		**TAX REBATES**	
Primary	R17 325	Primary	R17 820

Secondary (Persons 65 and older	R9 444	Secondary (Persons 65 and older	R9 765
Tertiary (Persons 75 and older)	R3 145	Tertiary (Persons 75 and older)	R3 249
TAX THRESHOLDS (YOU PAY ZERO TAX UP TO THESE AMOUNTS)			
Below 65 years old	R95 750	Below 65 years old	R99 000
Age 65 - 74	R148 217	Age 65 - 74	R153 250
Age 75 and above	R165 689	Age 75 and above	RR171 300
MONTHLY MEDICAL AID TAX CREDITS		MONTHLY MEDICAL AID TAX CREDITS	
Main Member	R376	Main Member	R364
First Dependant	R376	First Dependant	R364
Each Additional Dependant	R254	Each Additional Dependant	R246

Source: Adapted from www.sars.gov.za

Use TABLE 1 and the information given to answer the questions that follow.

7.1.1 Write down what the acronym SARS stands for. (2)

7.1.2 Explain the meaning of the term tax rebate. (2)

7.1.3 Identify the tax rebate that a 35 year old employee will qualify for in the 2025/2026 tax year. (2)

7.1.4 Determine the percentage change from tax one year to the next tax year, in the maximum income for the second tax bracket . (3)

7.2

Londiwe is 20 years old and earns a monthly basic salary of R29 500 in the 2026/2027 tax year. She contributes 7,5% of her monthly salary to a pension fund.
Use the information above and TABLE 1 to answer the questions that follow.

7.2.1 Calculate Londiwe's annual basic salary for the 2026/2027 tax year. (3)

7.2.2 Determine Londiwe's annual pension fund contribution for the tax year 2026/2027. (2)

7.2.3 Use the formula given to calculate Londiwe's annual taxable income.

Formula :

Annual Taxable Income = Annual Gross Salary – Pension Fund Contribution (2)

7.2.4 Identify the tax bracket used to calculate Londiwe's personal income tax. (2)

7.2.5 In the 2025/2026 tax year Londiwe earned an annual taxable income of R292 562. Her salary increased by 10% the following tax year, so she claimed that her income tax will increase by 10%.

Verify, using calculations, if her claim is correct. (7)

7.3

Mrs Khumalo is 57 years old and she earns an annual gross income of R480 000 and a bonus equal to her gross monthly salary. She has two children and contributes to a medical aid scheme for herself and her children. She contributes 7,5% of her monthly salary to a pension fund. She donates R500 a month to her church.

Use the 2025/2026 tax table shown in TABLE 1 to answer the questions.

7.3.1 Calculate the monthly pension fund contribution. (3)

7.3.2 Determine the percentage of her gross monthly salary that is spent on donations . (3)

7.3.3 Calculate Mrs Khumalo's annual taxable income.

You may use the formula:

Annual Taxable Income = Annual Gross Salary - Pension Fund Contribution – Donations + Bonus (3)

7.3.4 Calculate Mrs Khumalo's monthly PAYE. (7)

7.3.5 Mrs Khumalo claimed that she saved more than 3% of her income by contributing to a medical aid scheme. (5)

Verify, showing all calculations, if her claim is valid.

7.3.6 Give two reasons as to why a person should contribute to a pension fund. (4)

7.3.7 Determine Mrs Khumalo's monthly disposable income. (2)

Question 8

8.1 TABLE 1 and TABLE 2 show the electricity tariff structure for two municipalities in South Africa.

TABLE 1: ETHEKWINI PREPAID ELECTRICIY TARIFFS FOR RESIDENTS (2025/2026)

Energy charge(For customers who use an average of 150kWh and above)	327,95 c/kWh
Energy charge (Indigent customers)	213,11 c/kWh
Note : • There was a 12% increase in energy charge from the previous year. • Service charge is included in the energy charge. • All tariffs exclude VAT of 15%. • Indigent customers use an average less than 150kWh of electricity per month.	

Source : Adapted from www.durban.gov.za

TABLE 2: OVERSTRAND PREPAID ELECTRICIY TARIFFS FOR RESIDENTIAL USE (2025/2026)

Energy charge	0kWh - 350kWh	R2,5757/unit
	>350kWh - 600kWh	R3,1959/unit
	>600kWh	R3,6682/unit
Note : Indigent support – 70 free units. May buy up to 430 additional units per month to remain eligible for the indigent grant.		

Source : Adapted from www.facebook.com.Western Cape

Use TABLE 1 AND TABLE 2 and answer the questions that follow.

8.1.1 Explain the meaning of the term prepaid electricity in the context above. (2)

8.1.2 Identify the municipality with a stepped tariff structure. (2)

8.1.3 Convert the cost per unit of electricity in the Ethekwini District to rands. (2)

8.1.4 Determine the cost per unit of prepaid electricity in the 2024/2025 year for the Ethekwini District. (3)

8.1.5 Calculate the total cost of electricity for a resident in the Overstrand Municipality who uses an average of 500 units of electricity a month. (3)

8.1.6 Calculate the cost of electricity for a resident using an average of 350 units of electricity per month in the Ethekwini Municipality. (3)

8.1.7 A resident who uses 140kWh of electricity in Ethekwini Municipality claimed that electricity is cheaper in the Overstrand Municipality because you receive 70 free units.

Verify whether his statement is correct by showing calculations. (6)

8.1.8 Sketch a graph of the Overstrand Municipality electricity tariffs shown in TABLE 1, on the grid provided. (3)

8.1.9 Sketch a graph showing the tariff for the Ethekwini Municipality on the same system of axes. (2)

8.1.10 Use your graph to determine which municipality has cheaper rates for a resident using 300kWh of electricity. (2)

8.2 TABLE 3 shows banking tariffs of two South African banks.

TABLE 3: BANKING TARIFFS FOR STANDARD BANK AND CAPITEC BANK FOR 2025/2026

	Standard Bank		CAPITEC	
	STANDARD BANK – BUNDLED ACCESS ACCOUNT		**CAPITEC ACCOUNT**	
Monthly account fee		R53		R7,50
Transaction Fees	POS	FREE	POS	R2,00
Withdrawals	same bank ATM	R10 per R1 000 or part thereof up to R2 000, thereafterR2,80 per R100 or part thereof.	same bank ATM	R10 per R1 000
Withdrawals	Other bank ATM	R10 per R1 000 or part thereof up to R2 000, thereafterR2,80 per R100 or part thereof.	Other bank ATM	R10 per R1 000.
Deposits	Same bank ATM	R1,80 per R100 or part therof	Same Bank	R1,40 per R100
	Branch	R100 + R5 per R100 or part thereof	Branch	R15 per R100
Debit Order		R3,50		R3,00

Use TABLE 3 and the information given to answer the questions that follow.

8.2.1 Identify the bank with the lowest monthly fees. (2)

8.2.2 Write the ratio of the debit order fees for Capitec Bank is debit order fees for Standard Bank in simplified form. (3)

8.2.3 Determine the transaction fees that a Capitec Bank client will pay to transfer R5 000 to another Capitec Bank client. (2)

8.3.4 A Standard Bank client claimed that he pays less in transaction fees to withdraw R3 500 from a Standard Bank ATM compared to a Capitec Bank client who withdraws the same amount from his own ATM.

Use calculations to verify if his claim is correct. (5)

[40]

QUESTION 9

9.1 Tara and her four friends start a stokvel account. They each invest R500 per month. The money is put into a bank account where they receive 2,15% interest per month.

TABLE 1 below shows some of the information for their investment up till the last month. Study the table and answer the questions that follow:

TABLE 1 : STOKVEL ACCOUNT

MONTH	STOKVEL DEPOSIT (R)	OPENING BALANCE(R)	INTEREST (R)	CLOSING BALANCE (R)
1		2 500,00	53,75	2 553,75
2	2 500,00	5 053,75	108,66	5 162,41
3	2 500,00	7 662,41	164,74	7 827,15
4	2 500,00	10 327,15	222,03	10 549,18
…				
22	2 500,00	69 392,63	1 491,94	70 884,57
23	2 500,00	73 384,57	1 577,77	74 962,34
24	2 500,00	77 462,34	**A**	**B**

Adapted from www,personal.nedbank.co.za

Study the information above and answer the questions that follow:

9.1.1 Show how the opening balance in month 1 is R 2500.00 (3)

9.1.2 The interest amount for the second month is R108,66. Verify, showing ALL calculation whether the interest was correctly calculated. (2)

9.1.3 Determine the number of years that they paid this stokvel for. (2)

9.1.4 Calculate the values of **A** and **B**. show all working. (4)

9.1.5 If the stokvel continued up till 26 months, show with calculations how much they will have in this account at the end of 26 months. (5)

9.1.6 State ONE advantage of investing in a stokvel account. (2)

9.2 One of the friends, Thabi, in the stokvel group owns a car worth R180 000. She pays insurance of R1 250 per month. Her policy has an excess payment of R5 000.
One day she was involved in an accident and the repairs amounted to R32 000.
Note :
Car insurance excess - is the up-front amount you pay out of your pocket when making a claim.

9.2.1 Calculate the amount that Thabi spends on insurance in one year. (2)

9.2.2. Determine the amount that she pays towards the repairs. (2)

9.2.3 State the amount that the insurance company will pay for the repairs. (2)

9.2.4 Explain why it is important for Thabi to have car insurance. State TWO reasons. (2)

9.2.5 Name TWO factors that may affect the monthly insurance premium. (2)

[28]

QUESTION 10

10.1 Samkelo invests R50 000 in an account that earns 8% interest p.a compounded annually. He leaves the money in the account for 3 years. At the end of the second year, he withdrew R10 000 to purchase a new laptop.

10.1.1 Differentiate between *interest* and *interest rate*. (2)

10.1.2 Calculate the value of the investment at the end of the first year. (2)

10.1.3 Calculate the value of the investment just before the withdrawal. (2)

10.1.4 Determine the final amount in the account at the end of the three-year period. (4)

10.1.5 Calculate the amount of interest she earned over the three years. (2)

10.1.6 Explain the impact of a withdrawal on the interest earned. (2)

10.1.7 Samkelo claimed that he would have earned more than R10 000 extra in interest if he did not withdraw money during the investment period. Verify whether his claim is

valid. (6)

10.2 Samkelo, who is currently 50 years old, has elected to take out a funeral policy with Metropolitan in order to provide financial protection for his family in the event of death. His household comprises himself, his spouse (aged 48), and two children aged 7 and 15 years. The children are covered under the "child for life" category of the policy.

ANNEXURE A shows the information, premiums and cover levels available from a Metropolitan funeral plan.

Note:

· ***"Children"*** *refers to dependants who are covered as minors under the policy. This usually includes biological, adopted, or legally dependent children, and cover is often limited to a certain age (for example, up to 18 or 21 years, or older if they are still studying).*

· ***"Child for life"*** *refers to a child who is covered under the policy without an age limit. This means the child remains insured into adulthood for as long as the policy is active, often without needing to be removed or/ converted to a separate policy.*

Study the information and answer the questions that follow:

10.2.1 Explain why a waiting period is necessary when taking a funeral cover. (2)

10.2.2 Use the tables in ANNEXURE A to calculate Samkelo's monthly premium, if he takes cover for R20 000. (4)

10.2.3 Calculate the new monthly premium for his family, if premiums increase by 5% next year. (2)

10.2.4 Write the value of the premium for a member aged 68 years old taking a R20 000 cover to a life partner aged 66 years old with a R25 000 life cover as a ratio in its simplest form. (2)

10.2.5 Calculate Samkelo's annual current payment to Metropolitan. (2)

10.2.6 Different companies offer different premiums. Provide ONE reason as to why a person may choose a company with a higher premium. (2)

[34]

10.3 Sitha is a senior state accountant at the Department of Human settlements.

She has 25 years of service and a monthly salary of R40 000.

She wants to find out her monthly annuity if she retires at the end of 2026.

The Government Employees Pension Fund applies the following formula:

- Gratuity = 6,72% × annual salary × years of pensionable service
- Annual Annuity = (1/55 × annual salary × years of pensionable service) + R360

Gratuity is a lump- sum payment received upon retirement.

Annual Annuity is the annual payment received from a person's retirement savings from which monthly payments are determined.

Income replacement ratio (IRR) shows the percentage of pre-retirement income replaced by retirement benefits.

[Adapted from September 2025 preparatory exams]

Use the information above and answer the questions that follow:

10.3.1 Determine Sitha's annual salary. (2)

10.3.2 Sitha states that the gratuity she will receive when she retires will be greater than R800 000.
Verify, showing ALL calculations, whether her statement is CORRECT. (4)

10.3.3 Use the annual salary to calculate Sitha's monthly annuity. (4)

10.3.4 Hence, determine Sitha's income replacement ratio.
You may use the formula :
INCOME REPLACEMENT RATIO = $\frac{Monthly\ annuity}{Monthly\ income\ at\ retirement} \times 100$ (2)

10.4 Sitha plans to invest R0,4 million for 3 years in a bank that offers an interest rate of 7,5% p.a compounded half-yearly.

He claims that he will earn more than R46 000 in interest after one and a half years.

Verify, with calculations whether her claim is correct. (7)

ANNEXURE A

When does your cover start?

Your insured lives' cover starts from the first of the month in which Metropolitan receives their first premium.

What is a waiting period?

A waiting period is a period of time in which an insured life is not insured for some or all events. Waiting periods apply separately to each insured life. The waiting period starts from the first day of the month in which we receive the first premium from the organisation for an insured life.

Waiting periods are:

Member, life partner and children	Six months, unless the death is the direct result of an accident.
Parents	
Extended family	

When does your cover end?

A member discontinues membership of the organisation or when premiums are not paid.

Premiums and cover levels

We offer flexible and affordable premiums. You can choose one cover level per life category type.

Member

Cover levels	Age next birthday of member		
	19-65	66-70	71-75
5 000	18	62	75
10 000	34	100	128
15 000	50	137	181
20 000	66	175	234
25 000	82	213	287

Life partner

Cover levels	Age next birthday of life partner				
	17-65	66-70	71-75	76-80	81-85
5 000	12	64	88	141	205
10 000	23	128	176	282	409
15 000	35	192	264	423	614
20 000	47	256	352	565	819
25 000	58	320	441	706	1023

Children

Cover levels	Age next birthday of member
	19-75
5 000	2
10 000	3
15 000	5
20 000	6
25 000	8

Child for life

Cover levels	Age next birthday of child						
	1-25	26-45	46-60	61-65	66-75	76-80	81-85
5 000	9	14	20	27	61	136	177
10 000	18	28	40	53	122	273	354
15 000	28	41	60	80	183	409	531
20 000	37	55	80	107	244	545	708
25 000	46	69	100	133	305	682	886

Parents

Cover levels	Age next birthday of parent						
	19-25	26-45	46-60	61-65	66-75	76-80	81-85
5 000	11	16	23	31	71	158	205
10 000	21	32	46	62	141	316	410
15 000	32	48	70	92	212	474	615
20 000	43	64	93	123	283	631	820
25 000	53	80	116	154	353	789	1025

Extended family

Cover levels	Age next birthday of extended family						
	1-25	26-45	46-60	61-65	66-75	76-80	81-85
5 000	11	16	23	31	71	158	205
10 000	21	32	46	62	141	316	410
15 000	32	48	70	92	212	474	615
20 000	43	64	93	123	283	631	820
25 000	53	80	116	154	353	789	1025

SOURCE : www.metropolitan.co.za

QUESTION 11

11.1

James Mkhize and his spouse are visiting Portugal and have established their base in Lisbon. Presented below is an extract from a Google Map illustrating the route between Porto and Lisbon, Portugal.

[Source: www.googlemaps.co.za]

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

11.1.1 Identify the type of scale that is used on the map. (2)

11.1.2 Explain the meaning of the scale above. (3)

11.1.3 Measure the straight-line distance between Lisbon and Porto. (2)

11.1.4 Determine the direction of Badajoz from Salamanca. (2)

11.2

The Mkhize family intends to visit Porto. James has downloaded a map showing the various modes of transport available for travel between Lisbon and Porto

11.2.1 Determine the second fastest mode of transport. (2)

11.2.2 Compare the train speed and car speed in km/h.

You may use the following formula $\boldsymbol{Speed} = \frac{\boldsymbol{Distance}}{\boldsymbol{Time}}$ (5)

11.3

The Mkhize family rented a villa, where they were joined by another couple. Provided below is an image and a floor plan of the villa

PICTURE OF A VILLA

PLAN OF A VILLA

1:100

[Source: http//.www.google.com/images]

Use the above diagrams to answer the questions that follows.

11.3.1 Determine the number of bedrooms that the villa has. (2)

11.3.2 Name the rooms that have direct access to the veranda (2)

11.3.3 Identify the bedroom that has an ensuite (2)

11.4

The shape of the villa, excluding the garage, is an irregular octagon. Two of its sides measure 3 200 mm each, while the remaining six sides measure 3 500 mm.

11.4.1 Calculate the distance around the villa excluding the garage and the storeroom. (3)

11.4.2 The garage is designed to accommodate two vehicles. The clearance between the vehicles and the wall is 30 cm, and each vehicle has a width of 2,5 m. Calculate the total width of the garage. (4)

11.4.3 James asserts that the longer length on the plan measures 3.5 cm. Use the given scale to calculate the corresponding length on the plan to verify the validity of his claim. (3)

11.4.4 The villa has an open plan. Explain the meaning of "open plan" (2)

11.4.5 The owner of the villa wants to convert the storage into an office. Give two reasons why the storage cannot be used as an office (4)

11.4.6 List three rooms that will receive the sunlight in the morning. (3)

11.5

The Mkhize family will drive from Lisbon to Madrid in Spain. The distance to be travelled is 629 km. The chart below indicates the distances between places.

Berlin						
652	Brussels					
1315	773	Dublin				
930	319	463	London			
1868	1314	1450	1263	Madrid		
502	602	1375	916	1485	Munich	
877	261	777	341	1053	685	Paris
1182	1171	1882	1431	1361	698	1106 Rome

Note: the distances are given in km

[Source: www.googlemaps.co.za

Use the above chart to answer the questions that follow.

11.5.1 Give the name of the chart given above. (2)

11.5.2 Determine the distance between London and Madrid. (2)

11.5.3 James states that the distance from Lisbon to Madrid is longer than the distance between Munich and Brussels. Verify with calculations whether the statement is valid. (3)

11.5.4 The Mkhize family left Lisbon for Madrid at 06:30. The had two 30 minutes breaks on the way. Calculate their arrival time.

You may use the following formula : $\boldsymbol{Speed} = \frac{\boldsymbol{Distance}}{\boldsymbol{Time}}$ (4)

[52]

11.6

Mr Khuzwayo's house and car were slightly damaged during the tornado. He had to do some repairs to his property. Study the plan of Mr Khuzwayo's house on ANNEXURE B and answer the questions that follow:

11.6.1 Write down the name(s) of the room that will face the afternoon sun. (2)

11.6.2 State the general direction of the kitchen from the main bedroom (2)

11.6.3 Determine the probability of walking into a room with a door that opens to the right. (Write your answer as a decimal fraction) (2)

11.6.4 The elevation plan is also shown on ANNEXURE B.
Choose the correct letter, from the list below, which best describes elevation 2.

Write the letter only

A - North Elevation
B - South Elevation
C - East Elevation
D - West Elevation

(2)

11.6.5 The actual width of the house is 12 metres.

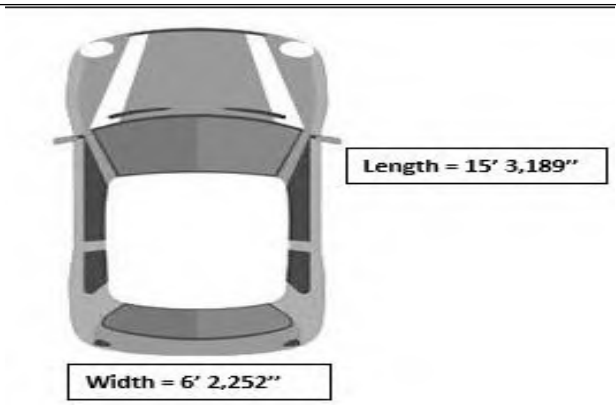
11.6.5.1 Measure the width of the house on the floor plan. (2)

11.6.5.2 Hence, calculate the scale used on this floor plan.
(Round off your answer to the nearest hundred.) (3)

11.7

Mr. Khuzwayo purchased a new vehicle. The dimensions of the vehicle is shown below:

SKETCH OF MR KHUZWAYO'S VEHICLE



Note :

6'2,252'' = 6 feet 2,252 inches

1 foot = 0,3048m

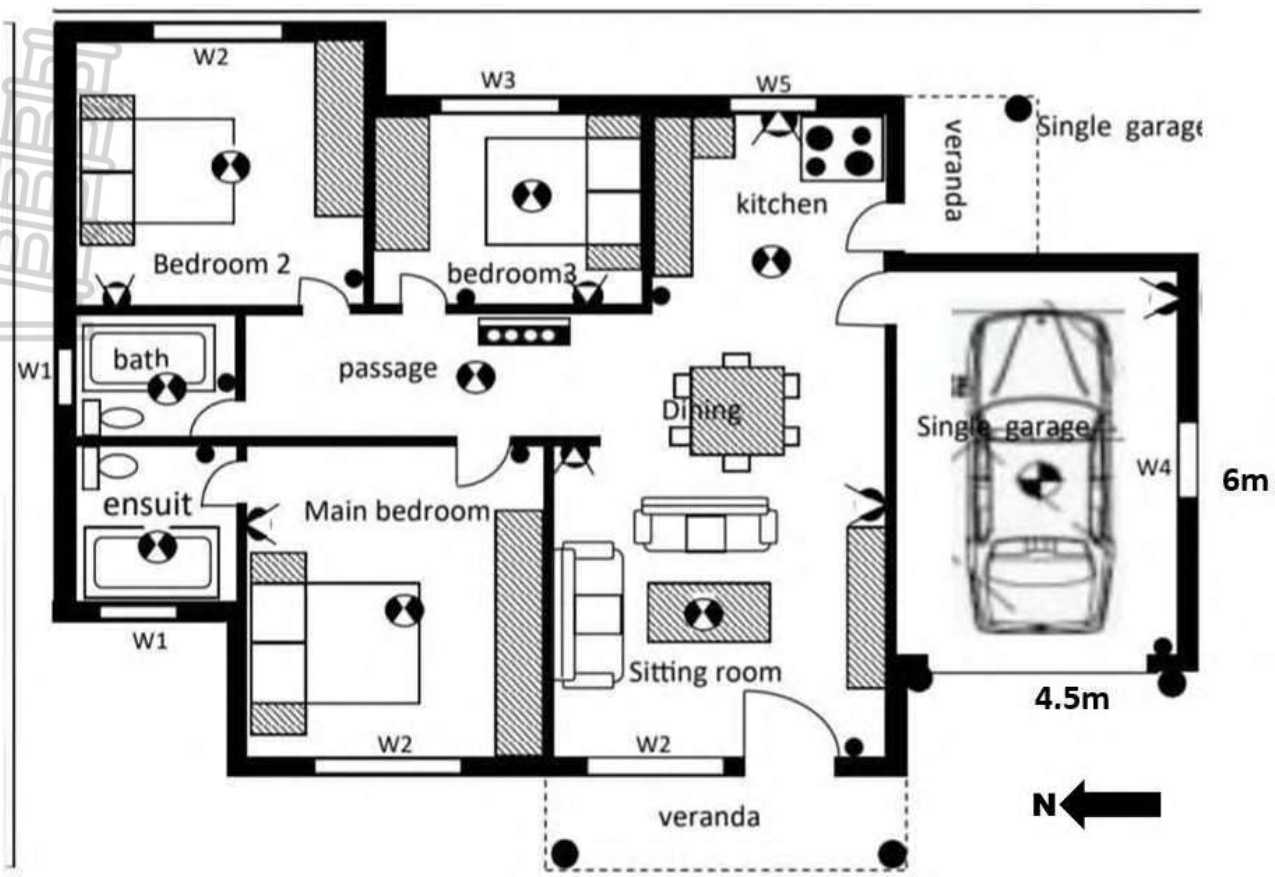
1 inch = 25,4mm

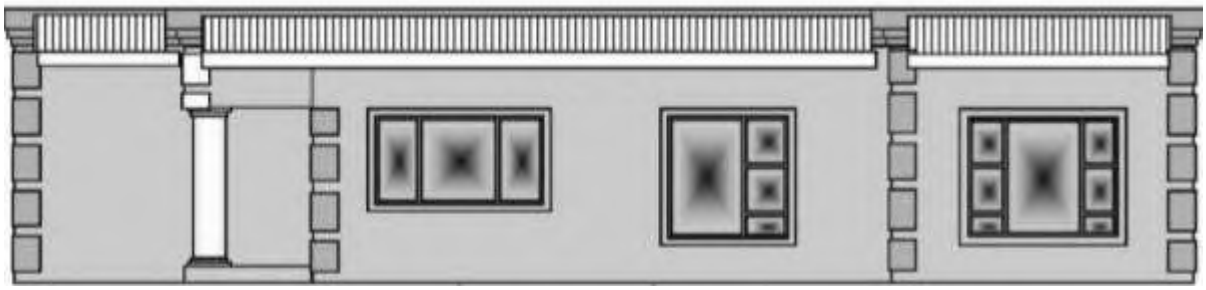
[Source: www.shutterstock.com]

11.7.1 Mr. Khuzwayo claims that the length of his new vehicle will not be able to fit along the length of his garage. Verify, showing all calculations whether his claim is VALID (5)

TOTAL: [70]

ANNEXURE B – QUESTION 11.6





Elevation 1

Elevation 2

[Extracted from www.facebook.com]

11.8 Mr Smith's daughter, Shianca lives in Bloemfontein. She and her friends are planning a road trip for the summer holidays. They have decided to go to Sun City.

Study the map on ANNEXURE A and answer the questions that follow.

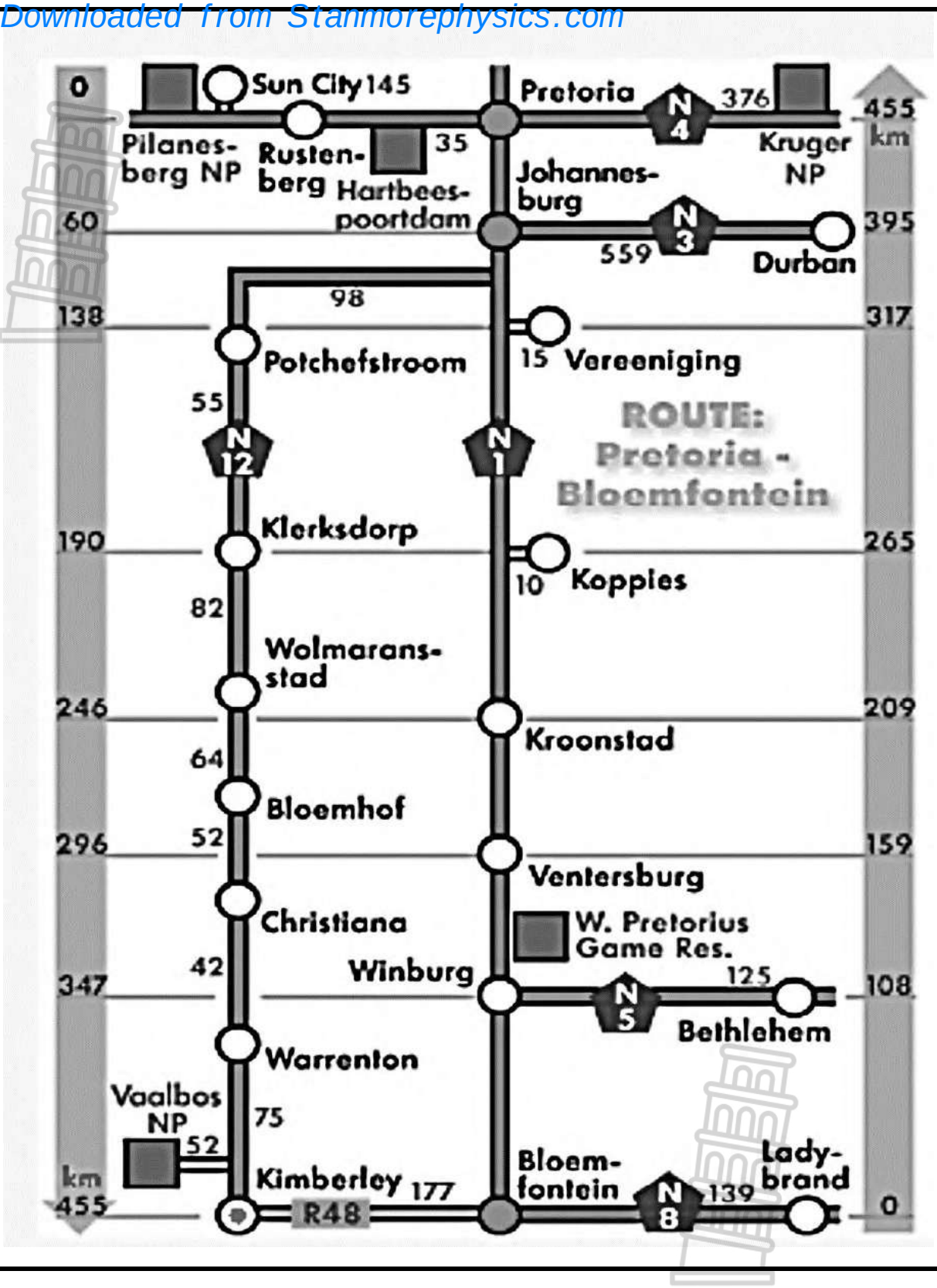
Use the information above and answer the questions that follow:

11.8.1 Identify the type of map shown on ANNEXURE A. (2)

11.8.2 Identify the National Road that will be used to travel from Bloemfontein to Sun City. (2)

11.8.3 Calculate the actual distance between Bloemfontein and Sun City. (2)

11.8.4 The petrol consumption of the car is 1,2 litres per $12km$ and petrol costs R20,80 per litre. Shianca claimed that the cost for travelling would be R2300 for a return trip from Bloemfontein to Sun City. Verify with calculations if her claim is valid. (5)



11.9

You are helping to plan a school fundraising. Below are the measurements of the floor plan of the school hall.

FLOOR PLAN MEASUREMENTS AND SCALE OF SCHOOL HALL

Scale 1:150

Measured on plan:

length = 12 cm

width = 8 cm

Stage: 4 cm × 2 cm in top left corner

Door width = 1 cm on plan

Use the information above to answer the following question.

11.9.1 Use the given scale to calculate the actual dimensions of the hall in metres. (4)

11.9.2 Calculate the actual floor area of the hall in m². (2)

11.9.3 The stage must be covered with carpet tiles that are 50 cm × 50 cm.

11.9.3.1 Calculate the actual dimensions of the stage in metres. (2)

11.9.3.2 Determine how many carpet tiles are needed to cover the stage. No cutting of tiles. (3)

11.10 The school wants to place tables that are 1.8 m long around the perimeter of the hall. There must be a 0.6 m gap between each table and a 1 m gap at the door. The door is on one of the width walls. How many tables can fit? (5)

11.11 A map of a local area has a Bar scale given as follows:

2 cm represents 300 m

Measured on map:

Bus stop to school gate = 5.5 cm

School gate to hall entrance = 3 cm

11.11.1 Determine the actual distance from the bus stop to the hall entrance in metres (4)

11.11.2 A learner walks at an average speed of 4.8 km/h. If they leave the bus stop at 07:40, what time will they arrive at the hall entrance? Ignore stopping time. (3)

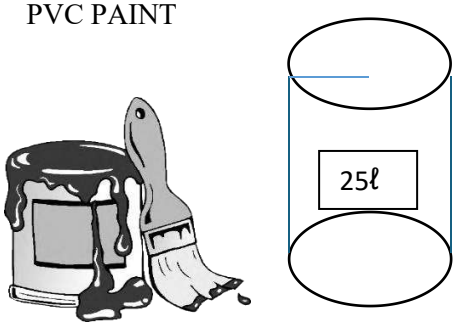
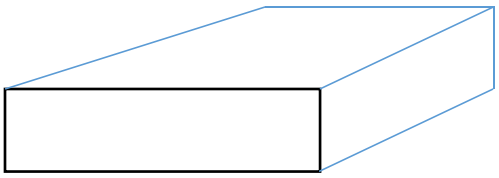
11.11.3 On the map, north is at the top of the page. If you walk from the bus stop to the school gate, in which general direction are you travelling?

(2)

TOTAL: [25]

QUESTION 12

The Goldstone construction has big steel containers where they keep their material. Below is one of their steel containers where they keep paint and tile boxes. They use $\frac{2}{3}$ of the steel container to store paint and $\frac{1}{3}$ to store tiles.

Picture of the steel container	Picture and drawing of paint
	PVC PAINT 
Picture of the tile box	Drawing of the tile box
	
Dimensions of the box	Dimensions of the paint can
Side = 45 cm Height = 12 cm **Note: 1 ft (') = 30.48cm** **1 inch (") = 2.54cm**	Radius = 13 cm Height = 50 cm

[source: http//.www.google.com/images]

12.1 Study the pictures and the information above to answer the questions that follow.

12.1.1 Measure the length, the width and the height of the steel container in centimeters as indicated on the picture. (3)

12.1.2 Convert the actual dimensions of the steel container i.e. Length, Width and Height to

centimeters. (6)

12.1.3 Use the height of the steel container to determine the scale that was used in the picture. (3)

12.2 Mr. Jali, who is a foreman, stated that the steel container can accommodate a maximum of 120 cans of paint and 300 boxes of tiles at the same time.

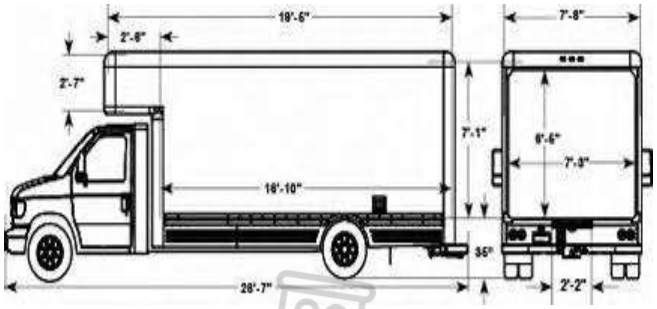
12.2.1 Calculate the number of cans and boxes of tiles that will be packed along the length of the steel container. (4)

12.2.2 Calculate the maximum number of cans of paint and boxes of tiles that can be housed in the container to verify Mr. Jali's statement regarding the number of cans and boxes of tiles. (7)

12.2.3 Determine the probability in words of picking a rectangular box of tiles in the container. (2)

12.4

The Goldstone Construction buys oil in 55 gallon drums. The oil is delivered by big trucks.The drums are loaded on square pallets.Each pallet will carry four drums of oil.The dimensions of the truck, pallet and drum are included

PICTURE OF THE TRUCK	DRAWING OF THE TRUCK
	
Note: 1 ft (') = 30.48cm **1 inch (") = 2.54cm**	Dimensions of the loading space Length = 18'10" Width =7'8" Height = 8'6"
PICTURE OF A PALLET	PICTURE OF AN OIL DRUM

	55 GAL 
Dimensions of the pallet Side = 43.3” Height =6”	Dimension of the drum Radius = 10,83” Height =35”
	source: http//.www.google.com/images

12.4.1 Determine the number of pallets that can be loaded on floor of the truck. (5)

12.4.2 “The above truck can load a maximum of 1200 gallons of oil.” Critically comment on the above statement using calculation to support your argument. (4)

12.5

The drums of oil are loaded onto the truck using a forklift. Provided below is an image of the forklift, together with its corresponding dimensions.	
PICTURE OF A FORKLIFT	DIMENSIONS OF A FORKLIFT
	Length with forks = 3772 mm Length without the forks = 2572 mm Height =2270 mm

12.5.1 Construct a scaled drawing of the rectangular shape of the forklift using a scale of 1:50. (6)

12.6

Cylindrical shaped 400g cans of Koo Baked Beans are transported by truck to the victims of the natural disaster at the shelter site. The cans of baked beans are packed into wooden boxes. The dimensions of one can of baked beans and the wooden box is shown below.

DIMENSIONS OF ONE CAN OF BAKED BEANS (400g)	**DIMENSIONS OF WOODEN BOX**
 *[Source : www.makro.co.za]*	 *[Source : www.takealot.com]*
Height = 10,8cm Diameter = 7,4cm	Length = 90cm Width = 45cm Height = 35 cm

12.6.1 Calculate the total number of baked beans cans that would fit in ONE wooden box. (5)

12.6.2 The truck can carry a maximum of 120 wooden boxes containing the cans of baked beans. 30 000 single cans of baked beans are required at the shelter site for the victims of the natural disaster. The driver claims that it is not possible to transport 30 000 baked beans in a single trip. Verify whether his claim is correct. (4)

12.6.3 The driver must deliver the load to the shelter site by 09:30. The shelter site is 55 km away from the loading area. If he leaves at 08:38 and maintains an average speed of 80 /*h* , verify whether he will arrive on time at the shelter.

You may use the formula: ***D*** = × (5)

12.6.4 Determine the radius of the baked beans can. (2)

12.6.5 The label on a single can of baked beans covers the entire can exactly. Calculate the total area of the label on the can. Round your answer to 1 decimal place.

You may use the formula: = × , × × (4)

12.6.6 A single can of baked beans is filled to 95% of its capacity. Calculate the volume of baked beans in a single can, in 3.

Note : = (3)

TOTAL: [64]

QUESTION 13 [51 MARKS]

13.1

As of March 2026, approximately 572 276 vehicles in South Africa are identified as unroadworthy on the National Traffic Information System (NaTIS), primarily comprising buses, taxis, and trucks.

TABLE 1: REPRESENTS THE PROVINCIAL BREAKDOWN OF UNRADWORTHY VEHICLES

PROVINCE	**GP**	**NC**	**KZN**	**EC**	**FS**	**LP**	**NW**	**WC**	**MP**
No. of vehicles	255 555	10 426	70 201	34 526	35 319	24 955	28 361	75 369	37 396

[Source: www.rtmc.co.za]

Us

13.1.1. Determine the total number of vehicles identified of unroadworthy in South Africa. (2)

13.1.2. List the main types of vehicles classified as unroadworthy according to the statement. (3)

13.1.3. Mention TWO reasons why it is important for the National Traffic Information System (NaTIS) to maintain accurate records of unroadworthy vehicles. (4)

13.1.4. State TWO possible sources of data that could have been used to determine which vehicles are unroadworthy. (4)

13.1.5 If you were tasked with collecting similar data for your local area: (3)
a) Describe THREE steps you would take to ensure your data is accurate and reliable.
b) Suggest THREE ways to organise the data you collect to make it easier to analyse. (3)

13.1.6 Verify, through calculations, whether the statement that provinces like Gauteng, followed by the Western Cape and KwaZulu-Natal, collectively accounts for approximately 70% of unroadworthy vehicles in South Africa is valid. (7)

[26]

13.2

A total of 2 818 fatalities were recorded between January and March 2024, compared to 2 498 during the same period in 2023. Similarly, 2 327 fatal crashes were reported for the same period in 2024, compared to 2 132 in 2023.

[Source: www.rtmc.co.za]

Use TABLE 1 and the information above to answer the following questions..

13.2.1 Classify the data given above into categories and organise it into a structured table that clearly distinguishes between the years and type of data. (5)

13.2.2 Calculate the percentage increase in: (3)
a) Fatalities from 2023 to 2024
b) Fatal crashes from 2023 to 2024 (3)

You may use the formula: **Percentage change** $= \frac{\text{New value} - \text{Old value}}{\text{Old value}} \times 100\%$

13.2.3 Compare the percentage increases in fatalities and fatal crashes. Which category experienced a more significant change? Provide a justification using the data. (6)

13.2.4. Critically analyse whether the increase in fatalities is proportional to the increase in fatal crashes. Support your answer with calculations and reasoning. (4)

13.2.5. Based on the data, suggest TWO possible implications for road safety in South Africa. Justify your suggestions using the data provided. (4)

[25]

QUESTION 14 [20 MARKS]

14.1

The number of registered vehicles increased in South Africa by 171 959 (1.32%) from 13 023 834 in March 2023 to 13 195 793 vehicles in March 2024. Detail per type of vehicle is given in table below.

TABLE 2: SHOWS THE NUMBER OF REGISTERED MOTORISED VEHICES IN SOUTH AFRICA FROM MARCH 2023 AND MARCH 2024.

Motorised Vehicles	Number registered Mar-23	Number registered Mar-24	Change	% Change	% of Group Mar-24	% of Total Mar-24
Motorcars	7 727 988	7 837 771	109 783	1,42%	65,62%	59,40%
Minibuses	350 680	356 164	5 484	1,56%	2,98%	2,70%
Buses	64 298	64 994	696	1,08%	0,54%	0,49%
Motorcycles	347 621	350 405	2 784	0,80%	2,93%	2,66%
LDV's - Bakkies	2 670 338	2 701 912	31 574	1,18%	22,62%	20,48%
Trucks	386 641	393 725	7 084	1,83%	3,30%	2,98%
Other & Unknown	237 504	239 469	1 965	0,83%	2,00%	1,81%

Use the information above and answer the following questions.

14.1.1. Identify the type of motorised vehicle that had the largest increase in numbers between March 2023 and March 2024. (2)

14.1.2. Calculate the total number of vehicles that increased from March 2023 to March 2024. (2)

14.1.3 Compare the percentage of total for Motorcars and LDV's – Bakkies in March 2024. What does this tell you about the composition of total vehicles? (3)

14.1.4 Which vehicle type contributes the least to the total vehicle population? (2)

14.1.5. The percentage of total motorised vehicles is 90,52%. Suggest a reason why it might not equal 100%. (2)

14.1.6. Using the % of group, determine how many vehicles fall under "Other & Unknown" as a percentage of total registered motorised vehicles. (2)

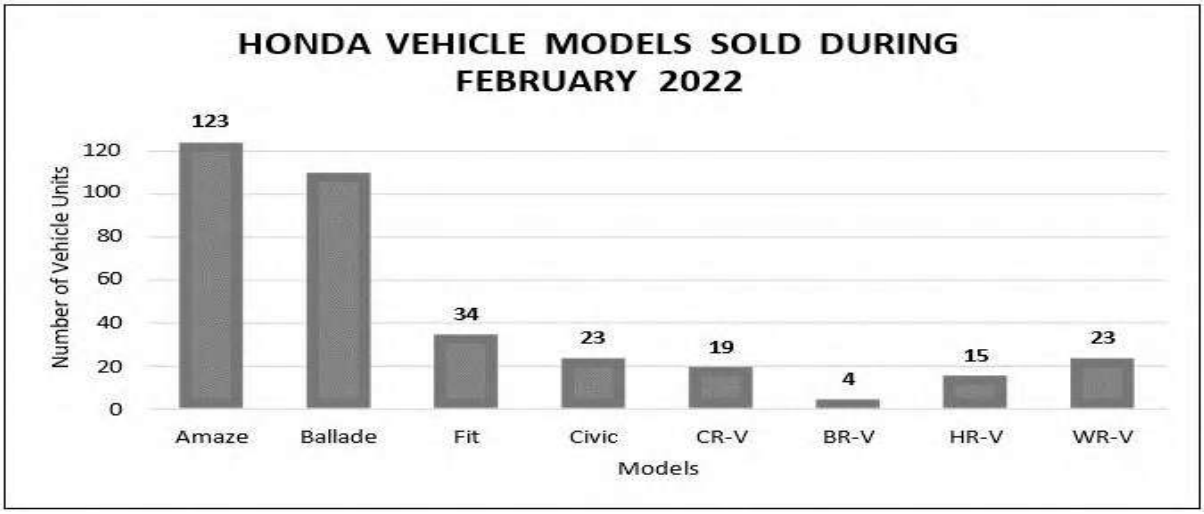
14.1.7. The government wants to reduce the growth of Trucks by 50% next year. How many trucks should they aim to reduced with in March 2025? (3)

14.1.8. Discuss the implications of an increase in Motorcars and LDV's on road congestion and environmental impact. (4)

QUESTION 15

15.1

The following bar graph shows the number of Honda vehicle models sold in South Africa during February 2022.



[Adapted from: <https://www.cars.co.za/motoring-news/what-has-happened-to-honda-sa-a-look-at-sales-figures/117948/>]

Use the information above to answer the questions that follow.

15.1.1 Which data cycle step deals with graphs? (2)

15.1.2 Give the name of the graph represented above. (2)

15.1.3 Calculate, as a percentage, the probability of randomly selecting an Amaze model. (2)

15.1.3 Determine, as a decimal, the probability of randomly selecting a model that begins with the letter 'C'. (3)

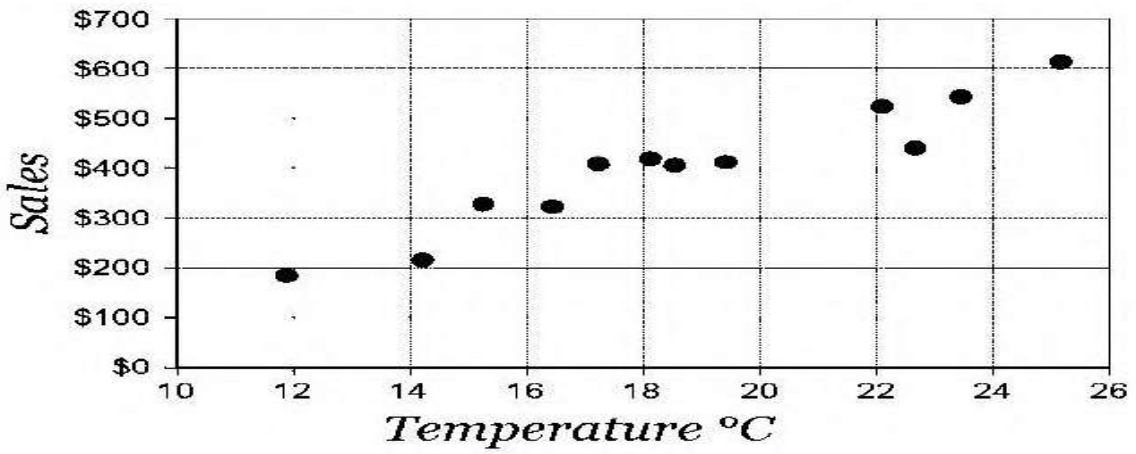
15.1.5 If the mean for the vehicle units sold is 43,75, use calculations to show that the missing value for the Honda Ballade model is 109 units. (4)

15.1.6 Is the information given above biased or not? Give a reason for your answer. (3)

15.1.7 Mention a reason why histogram cannot be a good representative of the information given above. (2)

15.2

The local ice cream shop keeps track of how much ice cream they sell versus the noon temperature on that day. The graph below shows the temperature versus the sales for the last 12 days:



[Source www.mathsisfun.com/data/scatter-xy-plots.html]

Use the information above to answer the questions that follow.

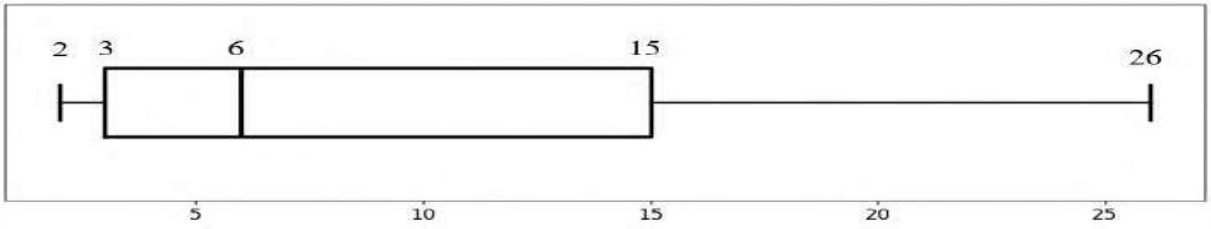
15.2.1 Determine the dependent variable in the table above. (2)

15.2.2 Identify the type of the scatter plot shown above and describe it. (3)

In its 2024/25 Integrated Annual Report, the Gauteng Management Agency — the body responsible for overseeing the Gautrain Project — published updated employment statistics. Figure 2 below is a box-and-whisker diagram showing a summary of the number of employees recorded on 1 April 2024.

Number o

employees per business unit on the 1st of April 2024



The number of employees per business unit, arranged in ascending order, for the year ending 31 March 2025 is shown below:

2	2	3	3	4	**Z**	**Z**	8	9	15	16	17

15.3

Use the information above to answer the questions that follow.

15.3.1 Determine the probability, as a percentage, that a business unit chosen at random had more than 15 employees for the year ending 31 March 2025. (3)

15.3.2 Define the term probability in this context. (2)

15.3.3 Write down the 5-number summary for the year ending 31 March 2025 (4)

15.3.4 The mean number of employees for the year ending 31 March 2025 is 14. (4)

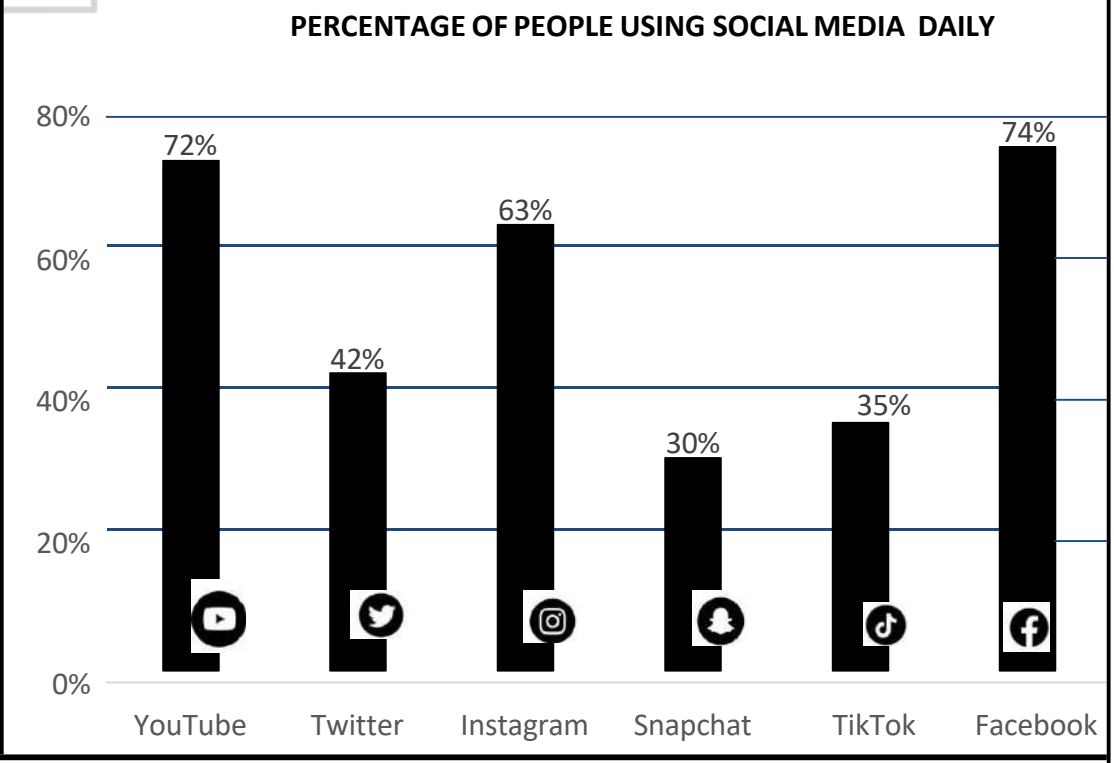
Calculate the missing value of Z.

[36]

QUESTION 16

16.1 Over the past few years, people have relied more on social media platforms to facilitate the creation and sharing of information, ideas and other forms of expression through virtual communities and networks.

The graph below shows the percentage of people using social media daily.



[Source: Data portal's Global Social Media Statistics report]

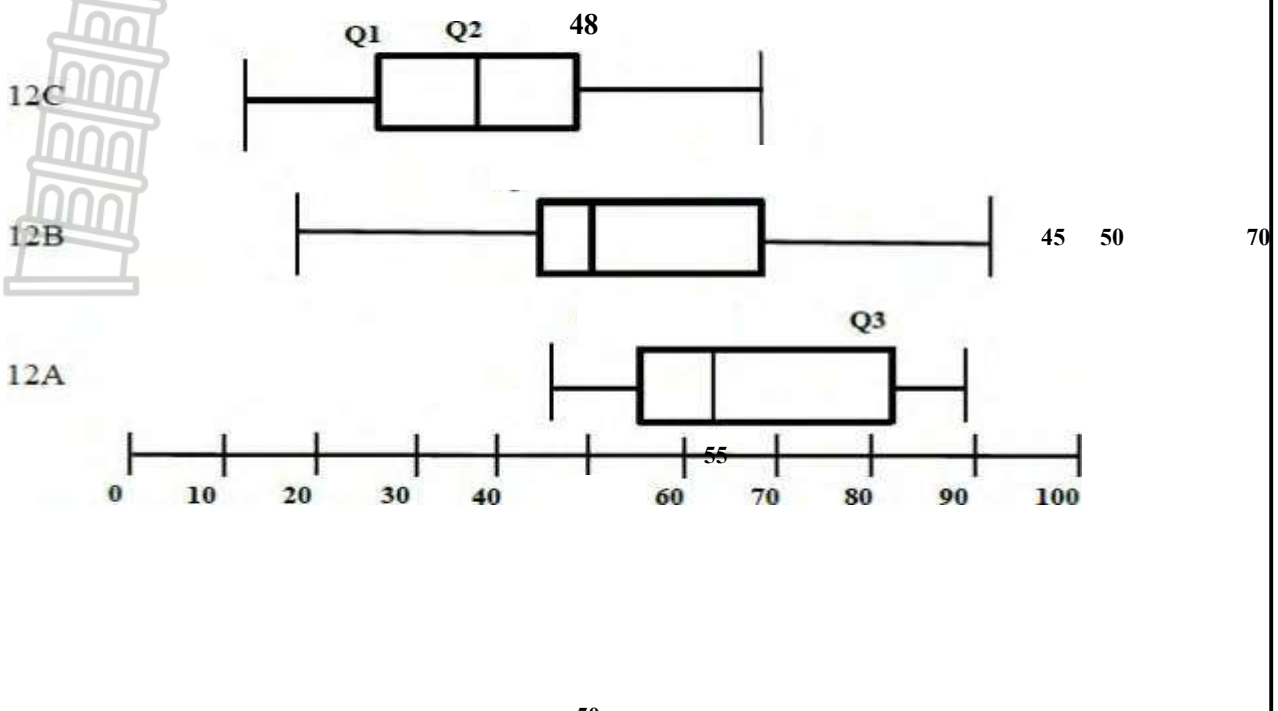
Use the information above to answer questions that follow.

16.1.1 Identify the SECOND HIGHEST social media form that is used daily. (2)

16.1.2 Give ONE reason why the information on the graph may be considered biased. (2)

16.1.3 Give ONE reason why the information on the graph does not give a total of 100%. (2)

16.2 Mr. Buthelezi teach three grade 12 Mathematical Literacy classes. He has summarised the performances, of the three classes in the formal test of 100 marks, in the graphs below.



50

Use the information above to answer the following questions.

16.2.1 Name the type of graph that Mr. Buthelezi used. (2)

16.2.2 Calculate the upper quartile (Q3) of 12 A, if the inter quartile range (IQR) is 27. (4)

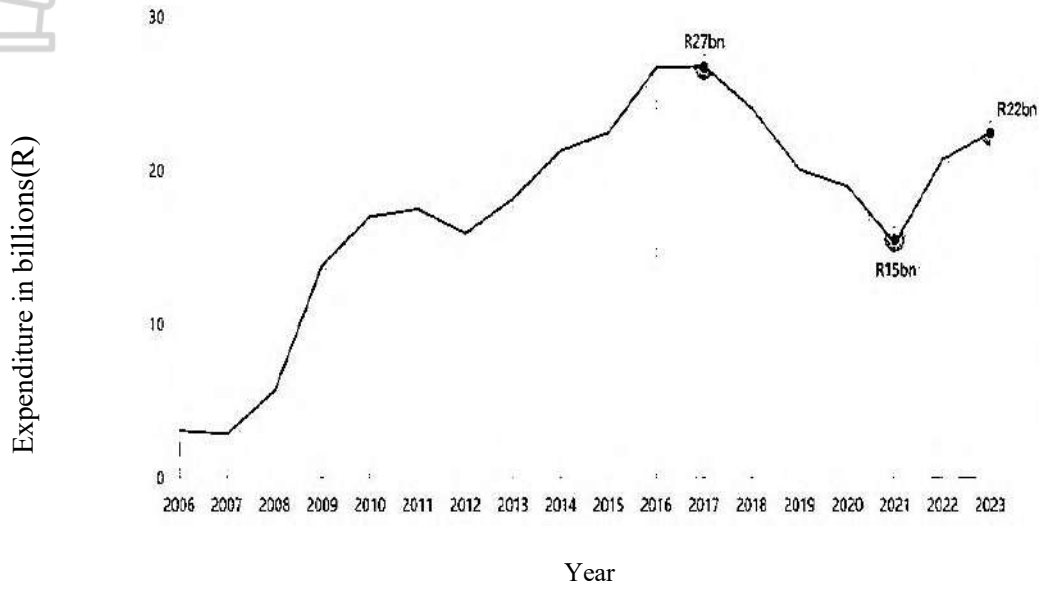
16.2.3 Write down the percentage of learners in 12 C that performed above 48. (2)

16.2.4 Explain what it means for a learner who is at Q3. (2)

16.3 South Africa's 258 EBAs are public institutions that provide services to the public on behalf of government. Examples include the National Research Foundation, the Unemployment Insurance Fund and the South African Social Security Agency.

The graph below shows capital expenditure for South African EBAs from 2006 to 2023.

CAPITAL EXPENDITURE FOR SOUTH AFRICAN EBAs 2006 to 2023



[Adapted from Capital expenditure by the public sector,2023]

Use the information above to answer the following questions.

16.3.1 Name the type of graph used above. (2)

16.3.2 Write down the highest amount of the expenditure as indicated by the graph in digits without any words. (2)

16.3.3 Explain the trend of the expenditure from 2019 to 2023. (4)

TOTAL: [25]