2026 ANNUAL TEACHING PLANS: ENGLISH MATHEMATICS: GRADE 9 (TERM 1)

TERM 1	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10	WEEK 11
HOURS PER TOPIC	7		4,5	9		2	7	4,5	4,5	9	
TOPICS, CONCEPTS AND SKILLS	**WHOLE NUMBERS** **Properties of numbers** • Describe the real number system by recognising, defining and distinguishing properties of: — natural numbers — whole numbers — integers — rational numbers — irrational numbers **Multiples and factors** • Use prime factorisation of numbers to find LCM and HCF **Solving problems**		**INTEGERS** **Calculations with integers** • Revise: — perform calculations involving all four operations with integers — perform calculations involving all four operations with numbers that involve the squares, cubes, square roots and cube roots of integers **Properties of integers** • Revise: — Commutative, associative and distributive	**EXPONENTS** **Comparing and representing numbers in exponential form** • Revise compare and represent: — integers in exponential form — numbers in scientific notation • Extend scientific notation to include negative exponents **Calculations using numbers in exponential form** • Revise the following general laws of exponents**:**		**FORMAL ASSESSMENT TASK** **ASSIGNMENT** • Whole numbers • Integers • Exponents	**NUMERIC AND GEOMETRIC PATTERNS:** **Investigate and extend patterns** • Investigate and extend numeric and geometric patterns looking for relationships between numbers including patterns: — represented in physical or diagram form, — not limited to sequences involving a constant difference or ratio, — of learner's own creation, — represented in tables, — *represented* algebraically	**FUNCTIONS AND RELATIONSHIPS** **Input and output values** • Determine input values, output values or rules for patterns and relationships using: — flow diagrams — tables — formulae — equations **Equivalent forms** • Determine, interpret and justify equivalence of different descriptions of the same relationship or rule presented: — verbally — in flow diagrams	**ALGEBRAIC EXPRESSIONS** **Algebraic language** • Revise the following: — Recognize and identify conventions for writing algebraic expressions — Identify and classify like and unlike terms in algebraic expressions — Recognize and identify coefficients and exponents in algebraic expressions — Recognize and differentiate between monomials,	**REVISION** **FORMAL ASSESSMENT TASK** **TEST: All topics**	

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	• Solve problems in contexts involving — ratio and rate — direct and indirect proportion • Solve problems that involve whole numbers, percentages and decimal fractions in financial contexts such as: — profit, loss, discount and VAT — budgets — accounts — loans — Simple interest — hire purchase — exchange rates — commission — rentals — compound interest	properties of addition and multiplication for integers — additive and multiplicative inverses for integers **Solving problems** • Solve problems in contexts involving multiple operations with integers	— $a^m \times a^n = a^{m+n}$ — $a^m \div a^n = a^{m-n}$, if $m>n$ — $(a^m)^n = a^{m \times n}$ — $(a \times t)^n = a^n \times t^n$ — $a^0 = 1$ • Extend the general laws of exponents to include: — integer exponents: $a^{-m} = \frac{1}{a^m}$ • Perform calculations involving all four operations using numbers in exponential form, using laws of exponents **Solving problems** • Solve problems in contexts involving numbers in exponential form, including scientific notation		• Describe and justify the general rules for observed relationships between numbers in own words or in algebraic language	— in tables — by formulae — by equations — by graphs on a Cartesian plane	binomials and trinomials	

| PREREQUISITE SKILL OR PRE-KNOWLEDGE | • The commutative; associative; distributive properties of whole numbers
 • 0 in terms of its additive property (identity element for addition)
 • 1 in terms of its multiplicative property (identify element for
 • multiplication)
 • Recognise the division property of 0, whereby any number divided by 0 is undefined | • Perform calculations involving all four operations with numbers that involve squares, cubes, square roots and cube roots of integers
 • Calculate the squares, cubes, square roots and cube roots of rational numbers | • Laws of exponents
 • Compare and represent integers in exponential form
 • Compare and represent numbers in scientific notation, limited to positive exponents | | • Determine input values, output values and rules for patterns given in input-output diagrams
 • Determine equivalence of different descriptions of the same relationship or rule presented verbally, in a flow diagram, by a number sentence. | • Determine input values, output values or rules for patterns and relationships
 • Determine, interpret and justify equivalence of different descriptions of the same relationship or rule | recognize and interpret rules or relationships represented in symbolic form
 -- identify variables and constants in given formulae and/or equations
 • Recognize and identify conventions for writing algebraic expressions
 • Identify and classify like and unlike terms in algebraic expressions
 • Recognize and identify coefficients and exponents in algebraic expressions | |

2026 ANNUAL TEACHING PLANS: ENGLISH MATHEMATICS: GRADE 9 (TERM 2)

TERM 2	2	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10	WEEK 11	WEEK 12
HOURS PER TOPIC		11,5			9			9		9		8	
TOPICS, CONCEPTS AND SKILLS	**FORMAL ASSESSMENT TASK** **INVESTIGATION** **Note: Administer an investigation on any ONE of the Term 2 topics before teaching it**	**ALGEBRAIC EXPRESSIONS** **Expand and simplify algebraic expressions.** • Revise the following: using the commutative, associative and distributive laws for rational numbers and laws of exponents to: — add and subtract like terms in algebraic expressions. — multiply integers and monomials by: monomials, binomials, trinomials — divide the following by integers or monomials: monomials, binomials, trinomials — simplify algebraic expressions involving the above operations — determine the squares, cubes, square roots and cube roots of single algebraic terms or like algebraic terms **N.B. ENSURE THAT COMMON FRACTIONS AND DECIMAL FRACTIONS ARE PART OF CALCULATIONS**			**ALGEBRAIC EQUATIONS** **Equations** • Revise the following done in Grade 8: — set up equations to describe problem situations — analyse and interpret equations that describe a given situation — solve equations by inspection — using additive and multiplicative inverses — using laws of exponents — determine the numerical value of an expression by substitution. — use substitution in equations to generate tables of ordered pairs • Extend solving equations to include: — using factorisation — equations of the form: a product of factors = 0			**GRAPHS** **Interpreting graphs** • Revise the following done in Grade 8: — analyse and interpret global graphs of problem situations, with a special focus on the following trends and features: ✓ linear or non-linear ✓ constant, increasing or decreasing ✓ maximum or minimum ✓ discrete or continuous • Extend the focus on features of graphs with special focus on the following features of **linear graphs**: — x-intercept and y-intercept — Gradient		**GEOMETRY OF STRAIGHT LINES** **Angle relationships** • Revise and write clear descriptions of the relationship between angles formed by: — perpendicular lines — intersecting lines — parallel lines cut by a transversal **Solving problems** • Solve geometric problems using the relationships between pairs of angles described above		**REVISION** **FORMAL ASSESSMENT TASK** **TEST** All Term 1 & 2 topics	

WITH EXPRESSIONS (Page 122 and 123 of CAPS)

- Extend the above algebraic manipulations to include:
  - multiply integers and monomials by polynomials,
  - divide polynomials by integers or monomials,
  - the product of two binomials,
  - the square of a binomial
- Determine the numerical value of algebraic expressions by substitution

Factorize algebraic expressions

- Factorize algebraic expressions that involve:
  - common factors
  - difference of two squares
  - trinomials of the form:
    - ✓ $x^2 + bx + c$
    - ✓ $ax^2 + bx + c$, where a is a common factor.
- Simplify algebraic expressions that involve the above factorisation processes.
- Simplify algebraic fractions using factorisation

Drawing graphs

- Revise the following done in Grade 8:
  - draw global graphs from given descriptions of a problem situation, identifying features listed above.
  - Use tables of ordered pairs to plot points and draw graphs on the Cartesian plane
  - Extend drawing of graphs with special focus on:
  - drawing linear graphs from given equations
- Extend the above with special focus on:
  - drawing linear graphs from given equations
  - determining equations from given **linear graphs.**

| PREREQUISITE SKILL OR PRE-KNOWLEDGE | | Common and decimal fractions Algebraic language Factors and multiples Expand and simply algebraic expressions Substitution Determine the squares, cubes, square roots and cube roots of single algebraic terms or like algebraic terms | Write number sentences to describe problem situations Analyse and interpret number sentences that describe a given situation Solve and complete sentences by:
— inspection
— trial and improvement
Identify variables and constants in given formulae or equations
Use substitution in equations to generate tables of ordered pairs
Extend solving equations to include:
— using additive and multiplicative inverses | Analyse and interpret global graphs of problem situations, with a special focus on the following trends and features:
— linear or non-linear
— constant, increasing or decreasing
— maximum or minimum
— discrete or continuous Draw global graphs from given descriptions of a problem situation, identifying features listed above Use tables or ordered pairs to plot points and draw graphs on the Cartesian plane | Perpendicular lines Intersecting lines Parallel lines cut by a transversal Solve geometric problems using the relationships between pairs of angles described above | |

2026 ANNUAL TEACHING PLANS: ENGLISH MATHEMATICS: GRADE 9 (TERM 3)

TERM 3		WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10
HOURS PER TOPIC		9			4,5	10,5			4,5	4,5	3

TOPICS, CONCEPTS AND SKILLS	**FORMAL ASSESSMENT TASK**
	
	PROJECT
	
	Note: The project must cover a combination of topics from Term 1 to 3 and must be completed before the end of Term 3
		GEOMETRY OF 2D SHAPES
		
		Classifying 2D shapes
		• Revise properties and definitions of triangles in terms of their sides and angles, distinguishing between:
		  — equilateral triangles
		  — isosceles triangles
		  — right-angled triangles
		• Revise and write clear definitions of quadrilaterals in terms of their sides, angles and diagonals, distinguishing between:
		  — parallelogram
		  — rectangle
		  — square
		  — rhombus
		  — trapezium
		  — kite
		
		Similar and congruent triangles
		• Through investigation, establish the minimum conditions for congruent triangles
					AREA AND PERIMETER
					
					• Use appropriate formulae and conversions between SI units, to solve problems and calculate perimeter and area of:
					  — polygons
					  — circles
					• Investigate how doubling any or all of the dimensions of a 2D figure affects its perimeter and its area
						COLLECT, ORGANIZE AND SUMMARIZE DATA
						
						Collect data
						• Pose questions relating to social, economic, and environmental issues
						• Select and justify appropriate sources for the collection of data
						• Distinguish between samples and populations, and suggest appropriate samples for investigation
						• Select and justify appropriate methods for collecting data
						
						Organize and summarize data
						• Organize numerical data in different ways in order to summarize by determining:
						  — measures of central tendency
						  — measures of dispersion, including extremes and outliers
						• Organize data according to more than one criteria
						
						REPRESENT DATA
						
						Represent data
						• Draw a variety of graphs by hand/technology to display and interpret data including:
						  — bar graphs and double bar graphs
									PROBABILITY
									
									• Consider situations with equally probable outcomes, and:
									  — determine probabilities for compound events using two-way tables and tree diagrams
									  — determine the probability for outcomes of events and predict their relative frequency in simple experiments
									  — compare relative frequency with probability and explain possible differences
										REVISION
										
										FORMAL ASSESSMENT TASKS
										
										TEST:
										
										All Term 3 topics	

		• Through investigation, establish the minimum conditions for similar triangles **Solving problems** • Solve geometric problems involving unknown sides and angles in triangles and quadrilaterals, using known properties of triangles and quadrilaterals, as well as properties of congruent and similar triangles.		— histograms with given and own intervals — pie charts — broken-line graphs — scatter plots **INTERPRET, ANALYSE, AND REPORT DATA** **Interpret data** • Critically read and interpret data represented in a variety of ways. • Critically compare two sets of data related to the same issue. **Analyse data** • Critically analyse data by answering questions related to: — -data collection methods — -summary of data — -sources of error and bias in the data **Report data** • Summarize data in short paragraphs that include — drawing conclusions about the data — making predictions based on the data — making comparisons between two sets of data — identifying sources of error and bias in the data — choosing appropriate summary statistics for the data (mean, median, mode, range) — the role of extremes and outliers in the data		

| PREREQUISITE SKILL OR PRE-KNOWLEDGE | | • Identify and write clear definitions of triangles in terms of their sides and angles, distinguishing between equilateral triangles, isosceles triangles and right-angled triangles
• Identify and write clear definitions of quadrilaterals in terms of their sides and angles, distinguishing between parallelogram, rectangle, square, rhombus, trapezium and kite | • Use appropriate formulae to calculate perimeter and area of:
— squares
— rectangles
— triangles
— circles
• Calculate the areas of polygons, to at least
• 2 decimal places, by decomposing them into rectangles and/or triangles | • Design and use simple questionnaires to answer questions with multiple choice responses
• Organize (including grouping where appropriate) and record data using tally marks, tables and stem-and-leaf displays
• Group data into intervals
• Draw a variety of graphs by hand/technology to display and interpret data including:
— bar graphs and double bar graphs
— histograms with given and own intervals
— pie charts
— broken-line graphs | • Consider a simple situation (with equally likely outcomes) that can be described using probability
and:
— list all the possible outcomes
— determine the probability of each possible outcome using the definition of probability | |

2026 ANNUAL TEACHING PLANS: ENGLISH MATHEMATICS: GRADE 9 (TERM 4)

TERM 4	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10
HOURS PER TOPIC	4,5		4,5	9		4,5	4,5	4,5	4,5	3
TOPICS, CONCEPTS AND SKILLS	**GEOMETRY OF 3-D OBJECTS** **Classifying 3-D objects** • Revise properties and definitions of the 5 Platonic solids in terms of the shape and number of faces, the number of vertices and the number of edges. • Recognise and describe the properties of: — Spheres — Cylinders **Building 3-D models** • Use nets to make models of geometric solids, including: — Cubes — Prisms — Pyramids — Cylinders		**SURFACE AREA AND VOLUME OF 3-D OBJECTS** • Use appropriate formulae and conversions between SI units to solve problems and calculate the surface area, volume and capacity of: — cubes — rectangular prisms — triangular prisms — cylinders Investigate how doubling any or all the dimensions of right prisms and cylinders affects their volume	**TRANSFORMATION GEOMETRY** **Transformations** • Recognize, describe and perform transformations with points, line segments and simple geometric figures on a co-ordinate plane, focusing on: — reflection in the x-axis or y- axis — translation within and across quadrants — reflection in the line $y = x$ — rotation around a given point • Identify what the transformation of a point is, if given the co-ordinates of its image **Enlargements and reductions** • Use proportion to describe the effect of enlargement or reduction on area and perimeter of geometric figures • Investigate the co-ordinates of the vertices of figures that have been enlarged or reduced by a given scale factor		*REVISION*			*FORMAL ASSESSMENT TASK* *TEST: Term 1-4 topics*	
PREREQUISITE SKILL OR PRE-KNOWLEDGE	• Describe, name and compare the 5 Platonic solids in terms of the shape and number of faces, the		• Use of appropriate formulae to calculate the surface area, volume and capacity of cubes and rectangular prisms	• Translations, reflections, rotations enlargements and reductions with geometric figures and shapes on grid paper						

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	number of vertices and the number of edges • Usie nets to create models of geometric solids, including cubes, prisms and pyramids	• Describe the interrelationship between surface area and volume of the objects mentioned above • Use and convert between appropriate SI units, including: — $mm^2 \leftrightarrow cm^2 \leftrightarrow m^2 \leftrightarrow km^2$ — $mm^3 \leftrightarrow cm^3 \leftrightarrow m^3$ — $ml\ (cm^3) \leftrightarrow l \leftrightarrow kl$		