MATHEMATICS - GRADE 9 2024

TOPIC	ASSESSMENT STANDARDS	PORTFOLIO ASSESSMENT TASKS
PHASE 1 (17 January 2024 – 20 March 2024)		
Numbers, Operations and Relationships	Number systems, Real and Rational numbers	**Task 1:** Assignment: Number pattern 5 – 9 Feb **Task 2:** Control test: 21 Feb – 5 March
	Multiples and factors	
Relationships, modelling and number patterns	Determine input and output values	
	Investigate and extend patterns and functions in Algebra	
	Flow charts and tables	
	Solution as a rule or formula.	
Ratio, Rate and Proportion	Solutions of problems with regard to ratio and rate	
	Proportion: direct and indirect	
	Problem solving	
Fractions, Integers, BODMAS	Addition and Subtraction of Integers	
	Multiplication and Division with integers	
	Perform calculations with all 4 operations that involve squares, cubes and roots	
Algebra – Exponents (inc Scientific Notation)	Revision of algebraic language: coefficients, variables, exponents	
	Revise the laws of exponents	
	Integer exponents	
	Performing calculations with all operations	
	Scientific Notation	
Algebra - products	Multiply integers and monomials by polynomials	
	Divide polynomials by integers or monomials	
	Product of 2 binomials	
	Square of a binomial	
PHASE 2 (3 April 2024 – 14 June 2024)		
Algebraic methods (Equations)	Set up equations to describe and solve word problems	**Task 3:** Investigation: Similarity & congruency 6 – 10 May **Task 4:** June Exams 3 – 14 June
	Equations: algebraic solution, brackets and fractions, substitution	
Theorem of Pythagoras	Finding unknown lengths in figures and solids	
	Application to irrational numbers: surd form and irrational approximation	
Geometric properties	Revise geometry of straight lines and 2D shapes	
	Similar and congruent triangles	
	Properties of Quadrilaterals	
	Solve geometric problems	
PHASE 3 (9 July 2024 – 22 November 2024)		
Algebra	Factorisation: common factor, difference of two squares, trinomials	**Task 5:** Project: Graphs 12 – 16 Aug
	Using factorisation to simplify fractions	
Graphs and interpretations	Cartesian plane and coordinates	
	Drawing graphs using tables and rules	
	Straight line graphs: drawing, features (gradient, y-intercept), finding rule from graph and table	

Transformations	Review of concepts: translation, rotation and reflection	**Task 6:** Controlled Test 21 Aug – 3 Sep
	Translations with coordinates	
	Reflections with axes	
	Rotations about the origin	
Statistics	Collection of data, measures of central tendency, graphical representations and analysis	**Task 7:** Year-end Exam 11 – 22 Nov
Finance	Simple and compound interest using the formulae .	
	Hire purchase (inc deposits)	
Probability	Listing possible outcomes	
	Probability of an outcome by definition	
	Relative frequency of an outcome	
	Comparing relative frequency to theoretical probability	
	Compound events : tree diagrams	