

## MATHEMATICS - GRADE 9 2017

TOPIC	ASSESSMENT STANDARDS	PORTFOLIO ASSESSMENT TASKS
<b>PHASE 1 (7 November 2016 – 31 March 2017)</b>		
<b>Algebra</b>	Binomial products	☞ <b>Task 1</b> Dec Controlled Test Dec 2016
	Equations and word problems	
	Factorisation: common factor, difference of two squares, trinomials	
	Exponents: laws and definitions	
<b>Numbers, Operations and Relationships</b>	Rational numbers: representation and use	☞ <b>Task 2</b> Investigation: Number patterns 16 – 20 Jan
	Scientific notation	
	Using exponential laws in calculations	
<b>Algebraic methods</b>	Equations: algebraic solution, brackets and fractions, substitution	☞ <b>Task 3</b> Controlled Test 22 – 31 March
	Using factorisation to simplify fractions	
<b>Relationships and modelling</b>	Investigate patterns and functions in Algebra	☞ <b>Task 3</b> Controlled Test 22 – 31 March
	Recording and representation: flow charts and tables	
	Solution as a rule or formula	
<b>PHASE 2 (18 April 2017 – 30 June 2017)</b>		
<b>Data handling</b>	Collection, central tendencies, graphical representations and analysis	☞ <b>Task 4</b> Investigation – data handling 24 – 26 April
<b>Theorem of Pythagoras</b>	Finding unknown lengths in figures and solids	
	Application to irrational numbers: surd form and irrational approximation	
<b>Time, distance and speed</b>	Solution of problems with regard to ratio and rate	
	Proportion (direct and indirect) and related graphs	
<b>Positioning</b>	Scale drawing	☞ <b>Task 5</b> June Exams 19 – 30 June
<b>Graphs and interpretations</b>	Cartesian plane and coordinates	
	Drawing graphs using tables and rules	
	Straight line graphs: drawing, features (gradient, y-intercept), finding rule from graph and table	
<b>Transformations</b>	Review of concepts: translation, rotation and reflection	☞ <b>Task 5</b> June Exams 19 – 30 June
	Translations with coordinates	
	Reflections with axes	
	Rotations about the origin	
<b>PHASE 3 (24 July 2017 – 10 November 2017)</b>		
<b>Geometric properties</b>	Congruency: 4 axioms, simple proofs and deductions	☞ <b>Task 6</b> Project – scale drawing, congruency, similarity 31 July – 4 Oct
	Similarity: fundamental basics	
	Classification of quadrilaterals	
<b>Probability</b>	Listing possible outcomes	☞ <b>Task 7</b> Controlled Test 11 – 15 Sept
	Probability of an outcome by definition	
	Relative frequency of an outcome	☞ <b>Task 8</b> October Exam 30 Oct – 10 Nov
	Comparing relative frequency to theoretical probability	
	Compound events : tree diagrams	