Gorokan High School

Year 10 Assessment Schedule 2025

Mathematics Advanced Pathway

Task number	Task 1	Task 2		
Name of Task	Semester 1 Exam	Semester 2 Exam		
Task Due	Term 2, Week 5	Term 4, Week 4		
Outcomes assessed	MA5-ALG-P-01 MA5-ALG-P-02 MA5-EQU-P-01 MA5-EQU-P-02 MA5-TRG-P-01 MAO-WM-01	MA5-LIN-P-01 MA5-NLI-C-01 MA5-NLI-C-02 MA5-NLI-P-01 MA5-RAT-P-01 MA5-RAT-P-02 MAO-WM-01		
Components				**Task Weighting %**
Fluency	25	25		
Working Mathematically	25	25		
Total %	**50**	**50**		**100**

Course Outcomes:

MAO-WM-01: Develops understanding and fluency in mathematics through exploring and connecting mathematical concepts, choosing and applying mathematical techniques to solve problems, and communicating their thinking and reasoning coherently and clearly.
MA5-FIN-C-01: solves financial problems involving simple interest, earning money and spending money.
MA5-FIN-C-02: Solves financial problems involving compound interest and depreciation.
MA5-ALG-C-01: Simplifies algebraic fractions with numerical denominators and expands algebraic expressions.
MA5-IND-C-01: Simplifies algebraic expressions involving positive-integer and zero indices, and establishes the meaning of negative indices for numerical bases.
MA5-EQU-C-01: Solves linear equations of up to 3 steps, limited to one algebraic fraction.
MA5-TRG-C-02: Applies trigonometry to solve problems, including bearings and angles of elevation and depression.
MA5-ARE-C-01: Solves problems involving the surface area of right prisms and practical problems involving the area of composite shapes and solids.
MA5-DAT-C-01: Compares and analyses datasets using summary statistics and graphical representations.
MA5-PRO-C-01: Solves problems involving probabilities in multistage chance experiments and simulations.
MA5-LIN-C-01: Determines the midpoint, gradient and length of an interval, and graphs linear relationships, with and without digital tools.
MA5-NLI-C-01: Identifies connections between algebraic and graphical representations of quadratic and exponential relationships in various contexts.
MA5-MAG-C-01: Solves measurement problems by using scientific notation to represent numbers and rounding to a given number of significant figures.
MA5-VOL-C-01: Solves problems involving the volume of composite solids consisting of right prisms and cylinders.
MA5-GEO-C-01: Identifies and applies the properties of similar figures and scale drawings to solve problems.
MA5-LIN-C-02: Graphs and interprets linear relationships using the gradient/slope-intercept form.
MA5-NLI-C-02: Identifies and compares features of parabolas and exponential curves in various contexts.
MA5-TRG-C-01: Applies trigonometric ratios to solve right-angled triangle problems.
MA5-DAT-C-02: Displays and interprets datasets involving bivariate data.
MA5-RAT-P-01: Identifies and solves problems involving direct and inverse variation and their graphical representations (Path: Stn, Adv).
MA5-RAT-P-02: Analyses and constructs graphs relating to rates of change (Path: Stn, Adv).
MA5-ALG-P-01: Simplifies algebraic fractions involving indices, and expands and factorises algebraic expressions (Path: Adv).
MA5-ALG-P-02: Selects and applies appropriate algebraic techniques to operate with algebraic fractions, and expands, factorises and simplifies algebraic expressions (Path: Adv).
MA5-IND-P-01: Applies the index laws to operate with algebraic expressions involving negative-integer indices (Path: Adv)
MA5-IND-P-02: Describes and performs operations with surds and fractional indices (Path: Adv).
MA5-EQU-P-02: Solves linear equations of more than 3 steps, monic and non-monic quadratic equations, and linear simultaneous equations (Path: Adv).
MA5-LIN-P-01: Describes and applies transformations, the midpoint, gradient/slope and distance formulas, and equations of lines to solve problems (Path: Adv).
MA5-NLI-P-01: Interprets and compares non-linear relationships and their transformations, both algebraically and graphically (Path: Adv).
MA5-FNC-P-01: Uses function notation to describe and graph functions of one variable and graphs inequalities in one and 2 variables (Path: Adv).

MA5-VOL-P-01: Applies knowledge of the volume of right pyramids, cones and spheres to solve problems involving related composite solids (Path: Stn, Adv).

MA5-GEO-P-02: Constructs proofs involving congruent triangles and similar triangles and proves properties of plane shapes (Path: Ext).

MA5-POL-P-01: Defines, operates with and graphs polynomials and applies the factor and remainder theorems to solve problems (Path: Adv, Ext).

MA5-TRG-P-01: Applies Pythagoras' theorem and trigonometry to solve 3-dimensional problems and applies the sine, cosine and area rules to solve 2-dimensional problems, including bearings (Path: Stn, Adv).

MA5-ARE-P-01: Applies knowledge of the surface area of right pyramids and cones, spheres and composite solids to solve problems (Path: Stn, Adv).

MA5-CIR-P-01: Applies deductive reasoning to prove circle theorems and solve related problems (Path: Ext).

MA5-PRO-P-01: Solves problems involving Venn diagrams, 2-way tables and conditional probability (Path: Adv).

MA5-EQU-P-01: Solves monic quadratic equations, linear inequalities and cubic equations of the form $ax^3 = k$ (Path: Adv).

MA5-LOG-P-01: Establishes and applies the laws of logarithms to solve problems (Path: Adv).

MA5-TRG-P-02: Establishes and applies the properties of trigonometric functions and finds solutions to trigonometric equations (Path: Adv).

MA5-GEO-P-01: Establishes conditions for congruent triangles and similar triangles and solves problems relating to properties of similar figures and plane shapes (Path: Ext).

MA5-NET-P-01: Solves problems involving the characteristics of graphs/networks, planar graphs and Eulerian trails and circuits (Path: Stn).

MA5-DAT-P-01: Plans, conducts and reviews a statistical inquiry into a question of interest (Path: Stn, Adv).