



**Gorokan High School**  
**Year 9 Assessment Schedule 2024**  
*Mathematics Advanced Pathway*

| Task number              | Task 1   | Task 2                                    | Task 3  |  |            |
|--------------------------|--|---|---|--|------------|
| <b>Name of Task</b>      | Semester 1 Examination   | Assignment                                | Semester 2 Examination  |  |            |
| <b>Task Due</b>          | Term 2, Week 5   | Term 3, Week 7                            | Term 4, Week 5  |  |            |
| <b>Outcomes assessed</b> | MA5-ALG-C-01<br>MA5-IND-C-01<br>MA5-EQU-C-01<br>MA5-TRG-C-01<br>MA5-TRG-C-012<br>MAO-WM-01 | MA5-DAT-C-01<br>MA5-PRO-C-01<br>MAO-WM-01 | MA5-LIN-C-01<br>MA5-LIN-C-02<br>MA5-RAT-P-01<br>MA5-FIN-C-01<br>MA5-FIN-C-02<br>MA5-ARE-C-01<br>MAO-WM-01 |  |            |
| <b>Components</b>        |  | <b>Task Weighting %</b>                   |   |  |            |
| Fluency                  | 17.5   | 15  | 17.5  |  |            |
| Working Mathematically   | 17.5   | 15  | 17.5  |  |            |
| <b>Total %</b>           | <b>35</b>  | <b>30</b>                                 | <b>35</b>   |  | <b>100</b> |

## 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).