Varsity College
Year 10 Mathematical Methods 2025

Term 1

Week	Date	Topics	Assessment
1	**27-31 January** O-Week Australia Day: Monday	• O Week	
2	**3-7 February**	**Algebra** • Recall, define and interpret algebraic terminology • Identify, collect and simplify like terms • Substitute and evaluate expressions • Expand and simplify problems with brackets	
3	**10-14 February** Swimming Carnival: Tuesday	• Factorise algebraic expressions • Identify inverse operations and rearrange equations.	
4	**17-21 February**	• Determine the surface area of three-dimensional solids including pyramids, cones and spheres as an application of rearranging equations and substitution.	
5	**24-28 February**	**Index Laws** • Use positive index laws to simplify algebraic expressions $a^m \times a^n = a^{m+n}, a^m \div a^n = a^{m-n}, (a^m)^n = a^{mn}$ and $a^0 = 1$ • Use negative index laws to simplify $a^{-m} = \frac{1}{a^m}$ • Use fractional index laws to simplify $a^{\frac{m}{n}} = \sqrt[n]{a^m}$	
6	**3-7 March** GC25: Wednesday	**Surds** • Add and subtract surd terms by identifying like terms • Simplify a surd by finding a square factor	
7	**10-14 March**	• Simplify expressions involving surds using surd laws • Rationalise the denominator of a surd.	
8	17-21 March	**Revision**	**EXAM Lesson 3**
9	**24-28 March**	**Trigonometry** • Use Pythagoras' theorem to determine the various lengths of a right-angled triangle. • Recall trigonometric ratios and use to solve lengths. • Use trigonometric ratios to solve for angles.	
10	**31 March - 4 April**	• Use angles of elevation and depression to solve problems. • Solve problems involving bearings.	
School holidays: Friday April 4 - Sunday April 19			

Term 2

Week	Date	Topics	Assessment
1	**21-25 April** Easter Monday ANZAC Day: Friday	**Linear Algebra** • Sketch linear equations from: two points; equation; context.	
2	**28 April-2 May** GC25: Tuesday	• Determine the equation of a line that is parallel or perpendicular to each another line. • Construct a linear model from a worded problem and use model to solve a problem	
3	**5-9 May** Labour Day: Monday	**Inequalities** • Determine an inequality from a number line. • Solve inequalities by remembering to reverse the inequality sign when multiplying/dividing by a negative.	
4	**12-16 May**	**Scatterplots** • Describe the correlation found in scatterplots in terms of strength, direction and form. • Develop a linear model to fit data on a scatterplot. • Use a model from a scatterplot to make predictions, and evaluate the reasonableness of these predictions.	
5	**19-23 May**	**Simultaneous Equations** • Determine a simultaneous solution using a graph. • Determine a simultaneous solution using substitution method. • Determine a simultaneous solution using elimination method, with both the same and different coefficients.	
6	**26-30 May**	• Interpret contextual problems, apply knowledge to solve simultaneous equations and evaluate the reasonableness of the solution.	
7	**2-6 June** GC25: Wednesday	**Probability** • Recall and apply probability skills from years 7-9: theoretical probability, experimental probability, complementary events, two-way tables, Venn diagrams and tree diagrams. • Define unions and intersections between sets. • Use set notation and understand how this links to a Venn diagram.	
8	**9-13 June** GC25: Wednesday	• Use the addition law for non-mutually exclusive events • Define independent and conditional events and interpret language in a problem that implies these categories. • Apply the independent events law for intersections to calculate probability of two independent events occurring.	
9	**16-20 June**	• Apply the formula for conditional probability to calculate probabilities of and an event A given that event B has occurred. **REVISION**	
10	**23-27 June**	• Exam Shutdown	**SEMESTER EXAMS** **Lesson 1 and 2**
	School holidays: Saturday June 28 - Sunday July 13		