

2017 YEAR 10 MATHEMATICS CURRICULUM – Semester 2

TERM 3

Week	Topic	Learning Focus	Victorian Curriculum Substrand
1 - 3	Trigonometry	<ul style="list-style-type: none"> • Trigonometric ratios Sine Cosine, Tangent • Find side lengths of a triangle • Find angles in a triangle • Calculate angles of elevation and depression • Bearings • Worded application problems 	<ul style="list-style-type: none"> – Solve right-angled triangle problems including those involving direction and angles of elevation and depression (VCMMG346)
4 - 7	Linear Graphs	<ul style="list-style-type: none"> • Sketch linear graphs from a table of values. • Calculate the gradient of a line • Sketch linear graphs using the gradient – intercept method • Sketch linear graphs using the x and y intercept method • Determine equations of lines • Calculate the distance between two points • Calculate the midpoint of a line • Define and use gradients to determine parallel and perpendicular lines 	<ul style="list-style-type: none"> – Solve problems involving gradients of parallel and perpendicular lines (VCMNA338)
8 - 10	Simultaneous Equations and Inequalities	<ul style="list-style-type: none"> • Graphical solution of simultaneous equations • Solving simultaneous equations using both substitution and elimination methods • Solve linear inequalities 	<ul style="list-style-type: none"> – Solve simultaneous linear equations, using algebraic and graphical techniques including using digital technology (VCMNA337) – Solve linear inequalities and graph their solutions on a number line (VCMNA336)

Term 4

Week	Topic	Learning Focus	Substrand
1 - 3	Probability	<ul style="list-style-type: none"> Define sample space, mutually exclusive, complementary, odds. Draw and analyse Venn and Tree diagrams. Differentiate between dependent and independent events 	<ul style="list-style-type: none"> Describe the results of two- and three-step chance experiments, both with and without replacements, assign probabilities to outcomes and determine probabilities of events. Investigate the concept of independence (VCMSP347) Use the language of 'if ...then, 'given', 'of', 'knowing that' to investigate conditional statements and identify common mistakes in interpreting such language (VCMSP348)
4 - 6	*Quadratic Functions or Consumer Mathematics *Students will split into two groups depending on their Year 11 Maths selection (Methods, General, Foundation)	<ul style="list-style-type: none"> Expanding and factorising algebraic expressions Completing the square, Solving quadratic equations OR Purchasing – cash, credit cards, lay-by Buying on terms Discounts Compound interest Depreciation Loan repayments 	<ul style="list-style-type: none"> Describe, interpret and sketch parabolas, hyperbolas, circles and exponential functions and their transformations (VCMNA359) Expand binomial products and factorise monic quadratic expressions using a variety of strategies (VCMNA332) Connect the compound interest formula to repeated applications of simple interest using appropriate digital technologies (VCMNA328)
7	Exam Revision		