

# HPG A Group Mathematics Scope and Sequence 2021

Semester 1				
5.3				
5.2	Right-Angled Triangles (Trigonometry) MA5.2-13MG	Equations MA5.2-8NA	Equations MA5.2-8NA	Financial Mathematics MA5.2-4NA
5.1	Right-Angled Triangles (Trigonometry) MA5.1-10MG			Financial Mathematics MA5.1-4NA
4	Right Angled Triangles (Pythagoras) MA4-16MG	Equations MA4-10NA	Equations MA4-10NA	Financial Mathematics, Operations with Number MA4-5NA, MA4-6NA
Time	<b>Wks 1-6</b>	<b>Wks 7-10</b>	<b>Wks 1-3</b>	<b>Wk 4-10</b>
<b>Concepts</b>	<p>Applies trigonometry to solve problems, including problems involving bearings</p> <p>Applies trigonometry, given diagrams, to solve problems, including problems involving angles of elevation and depression</p> <p>Applies Pythagoras' theorem to calculate side lengths in right-angled triangles, and solves related problems</p>	<p>Solves linear and simple quadratic equations and linear inequalities, using analytical and graphical techniques</p> <p>Uses algebraic techniques to solve simple linear and quadratic equations</p>	<p>Solves linear and simple quadratic equations and linear inequalities, using analytical and graphical techniques</p> <p>Uses algebraic techniques to solve simple linear and quadratic equations</p>	<p>Solves financial problems involving compound interest</p> <p>Solves financial problems involving earning, spending and investing money</p> <p>Solves financial problems involving purchasing goods</p> <p>Operates with fractions, decimals and percentages</p>
<b>Assessment Tasks - Major</b>	Assessment Task 1 Due Term 1 Week 10		Assessment Task 2 Due Term 2 Week 10	
<b>Revision Excel Book</b>	Year 9 Extension Excel - Chapter 3 & 9 Year 10 Excel – Chapter 5	Year 9 Extension Excel - Chapter 6 Year 10 Excel – Chapter 3		Year 9 Extension Excel - Chapter 4 Year 10 Excel – Chapter 2

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Semester 2				
5.3	Volume MA5.3-14MG		Properties of Geometrical Figures MA5.3-16MG	
5.2	Volume MA5.2-12MG	Probability MA5.2-17SP	Properties of Geometrical Figures MA5.2-14MG	Direct/Indirect Proportion MA5.2-5NA
5.1	Area, Numbers of any Magnitude MA5.1-8MG, MA5.1-9MG	Probability MA5.1-13SP	Properties of Geometrical Figures MA5.1-11MG	
4	Length, Area and Volume MA4-12MG, MA4-13MG, MA4-14MG		Properties of 2D figures MA4-17MG	Ratio and Rates MA4-7NA
Time	<b>Wks 1-6</b>	<b>Wks 7-10</b>	<b>Wks 1-6</b>	<b>Wks 7-10</b>
<b>Concepts</b>	<p>Applies formulas to find the volumes of right pyramids, right cones, spheres and related composite solids</p> <p>Applies formulas to calculate the volumes of composite solids composed of right prisms and cylinders</p> <p style="padding-left: 40px;">Calculates the areas of composite shapes</p> <p>Interprets very small and very large units of measurement, and rounds to significant figures</p> <p>Calculates the perimeters of plane shapes and the circumferences of circles</p> <p>Uses formulas to calculate the areas of quadrilaterals and circles, and converts between units of area</p> <p>Uses formulas to calculate the volume of prisms and cylinders, and converts between units of volume</p>	<p>Describes and calculates probabilities in multi-step chance experiments</p> <p>Calculates relative frequencies to estimate probabilities of simple and compound events</p>	<p>Calculates the angle sum of any polygon and uses minimum conditions to prove triangles are similar</p> <p>Describes and applies the properties of similar figures and scale drawings</p> <p>Classifies, describes and uses the properties of triangles and quadrilaterals</p>	<p>Recognise direct and indirect proportion, and solves problems involving direct proportion</p> <p>Operates with ratios and rates and explores their graphical representation</p>
<b>Assessment Tasks - Major</b>	Assessment Task 3 Due Term 3 Week 8		Assessment Task 4 Due Term 4 Week 5	
<b>Revision – Excel Book</b>	Year 9 Extension Excel - Chapter 7 Year 10 Excel – Chapter 6	Both books – Chapter 10	Year 9 Extension Excel - Chapter 8 Year 10 Excel – Chapter 9	Year 9 Extension Excel – Chapter 1 – Units 10,11,12 only