



## SECONDARY SCHOOL YEARLY PLANNER 2022 – 2023

**Subject:** Mathematics (Standard)

**Grade level:** 9

**Teacher:** Ms Pepper

**Latest revision** (day month year): August 2022

Quarter	Start date	Midterm date	End date	HS Semester Exams
1	Wednesday 31 August 2022	Friday 30 September 2022	Wednesday 9 November 2022	12 <sup>th</sup> grade: 16-20 January / 9 <sup>th</sup> – 11 <sup>th</sup> grades: 18-20 January
2	Thursday 10 November 2022	Tuesday 13 December 2022	Friday 27 January 2023	
3	Monday 30 January 2023	Tuesday 7 March 2023	Thursday 6 April 2023	9 <sup>th</sup> – 11 <sup>th</sup> grades: 7-9 June
4	Friday 7 April 2023	Wednesday 17 May 2023	Friday 16 June 2023	

Quarter: 1, 2, 3, 4	Unit #	Unit Name/Title	Key Knowledge Area / Concept / Competence / Topic and Notes
1	1	What are the chances?	Content includes: <ul style="list-style-type: none"> <li>• Sample space</li> <li>• Probability of an event</li> <li>• Tree diagrams (with/without replacement)</li> <li>• Venn diagrams/probability with venn diagrams</li> <li>• Two way tables</li> <li>• Randomness</li> <li>• Probability proof</li> </ul>
1-2	2	A model of equality	Content includes: <ul style="list-style-type: none"> <li>• Linear equations with fractions and decimals</li> <li>• Systems of linear equations (substitution, elimination, graphing)</li> <li>• Application of systems of equations</li> <li>• Solving inequalities algebraically (theorems and proof) and graphically</li> <li>• Systems of linear inequalities</li> <li>• Linear programming</li> </ul>
2-3	3	Back to the beginning	Content includes: <ul style="list-style-type: none"> <li>• Expanding and factorising brackets/expressions + quadratics</li> <li>• <math>x^2 + bx + c \equiv (x + p)(x + q)</math>,</li> <li>• Application to shapes</li> <li>• Difference of two squares</li> <li>• Factoring exponents greater than 2</li> <li>• Factoring monic and non-monic expressions</li> </ul>



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Quarter: 1, 2, 3, 4	Unit #	Unit Name/Title	Key Knowledge Area / Concept / Competence / Topic and Notes
			<ul style="list-style-type: none"> <li>• Sum and product factorisation</li> <li>• Non factorable expressions</li> <li>• Quadratic functions - standard form/parabola of graphs</li> <li>• Polynomial functions</li> <li>• Vertex/algebraic form of quadratic functions</li> <li>• Quadratic and linear functions</li> <li>• Null factor law</li> <li>• Solving quadratic equations (graphing/algebraically)</li> </ul>
3-4	4	A whole range of things/City Skylines	Content includes: <ul style="list-style-type: none"> <li>• Representing and comparing sets of data</li> <li>• Stem and Leaf Diagrams/Box and Whisker Plots</li> <li>• Quartiles and ranges</li> <li>• Mean, median, mode and range</li> <li>• Effects of outliers</li> <li>• Cumulative frequency tables (grouped data)</li> <li>• Cumulative frequency graphs</li> <li>• Discrete data</li> <li>• Constructing and interpreting frequency and relative frequency histograms with equal class widths</li> <li>• Constructing and interpreting frequency density histograms with unequal class widths</li> <li>• Describing distributions</li> <li>• Histograms/distributions in histograms/varied class widths</li> </ul>
4	5	Are you saying I'm irrational?	Content includes: <ul style="list-style-type: none"> <li>• Radicals (surds)</li> <li>• Calculating with surds</li> <li>• Simplifying surds</li> <li>• Rationalising the denominator</li> <li>• Direct and inverse variation</li> <li>• Proportion graphs/constant of proportionality</li> <li>• Variation and graphing</li> <li>• Graphs of proportionality/modelling</li> </ul>