

**Algebra & Functions Unit Overview**  
(Scheduled in *tan*, changes from original in *red*)

Plan	Actual	Sec	HW Problems	Topics
	1/4	1A	1-4	Functions & relations
	1/4	1B	2ace,5all,6,9,11	Function notation
	1/4	1C	1adghi,2,3all,4jkl	Domain & Range
	1/6	1D	1-4	Composite functions
	1/6	1E	1cfil,2cfilo,3cfi,4cfil	Sign diagrams (use technology to confirm only)
	1/9	1F	1-2	Reciprocal Function
	1/9	1G	1a-d	Asymptotes
	1/11	1H*	2,4,5,6,7,8,10,11,12,14	Inverse functions
	1/13	2A	1,2cfi,3,4def	Number patterns
	1/13	2B	1dh,2,3	Number sequences
	1/13	2C*	2,3,5,7def,8cd,9a,11	Arithmetic sequences
	1/18	2D.1*	1,3bcd,4,7,8,9c,10bc	Geometric sequences
	1/18	2D.2	3,5,6,8,10	Compound interest
	1/18	2D.3	1,2	Population problems
	1/20	2E.1	1def,2cd,3,4	Sigma notation
	1/23	2E.2*	1d, 2bc, 3, 4-12 even	Arithmetic series
	1/23	2E.3*	1cd,2cd,3,4c,6	Geometric series
	1/23	2E.4	2,3,5,6,7	Sum of infinite Geometric series
	1/25	<b>Review</b>	<b>Review Sets 1C &amp; 2C</b>	
	1/27		Quiz	
	1/27	3A	1-2	Exponential notation
	1/27	3B	1-6	Evaluating powers - Negative bases
		3C*	1ijk,3ijk,4deij,7cdgh,8deij,9de,10cdgh,11cdgh	Exponent (index) laws
		3D	1deij,3deij,4defg,5deij	Rational exponents (indices)
		3E.1	1cfi,2cfil	Algebraic expansion
		3E.2*	1cf,2cfi,3cef,4cdgh,5cfi,6	Factoring and simplifying
		3F*	1dhi,2dhlp,3c,4cf,5cf	Solving exponential equations
		3G	1bdf,2all,4-6	Graphing exponentials, look for patterns
		3H.1	2,4	Exponential growth
		3H.2	1,3	Exponential decay
		3I	1,3,47cd,8cd,9dh,10,12,14	Natural number "e"
		4A*	1all,2all,3col,4,4all,5all,6efgh	Definition of Logarithms
		4B	1dglp,2cdgh,3deij,4,5,6cdgk	Base 10 logs
		4C.1*	1col3,2cfi,3ef,4ef,5becf,6becf,7all	Laws of logs
		4C.2*	1-3 last column of each	Log equations
		4D.1	1all,2,3,4all,5deij,6cdgh,	Natural logarithms
		4D.2	1-5 last column of each	Laws of natural logs (not new, more practice)
		4E	1-3 last column of each	Natural log equations
		4F	1cd,2bc,3,4,5	Change of base formula
		4G	1bd,2bd,3,4,5,6	Graphs of logarithms
		4H	1,3,4-14 even	Solve growth & decay using logs
			Quiz	
		5A*	2,4,5,7,9,10	Function families
		5B.1	1-4all,6a,7 – in class to discover	Translations – discover. (Use calculator!)
		5B.2	1cde,2ab,3,4ac,5ac,7,8no calc	Stretches
		5B.3	1ace,2,3,4,5,7	Reflections
		5B.4	1c,2c,3,4all	Transformation practice
		6A.1*	1aegkl,2behk,3bdf	Solve quadratics by factoring
		6A.2	1cfi,2cfi,3bcef	Completing the square
		6A.3	1beh,2bcef	Quadratic formula (by hand – check with calc)
		6B	2all,3all,4bdf	Discriminant
		6C.1	1bcf,2,3,4beh,5,6cfi,8beh	Sketching parabolas
		6C.2	2bdf,3cf	Graph from vertex form (completing the square)
		6C.3	1cf,2bd,3,4	Discriminant in graphing
		6D	1cf,2abc,3bdf,4def	Find quadratic from graph or info
		6E	1bd,2cd,3d,5,7	Intersections of lines & parabolas
		6F	3,6,8,11,13,15,18	Problem solving with quadratics
		6G	2,3,5,6,9	Optimization with quadratics
		7A	1dh,2dh,3cd,6,7,8ab	Binomial expansion
		7B	1c,2cd,3bd,4,6,7,9	Binomial theorem (use calculator to find <sup>n</sup> C <sub>r</sub> )

Note: We may not get to Ch 7, the Binomial Theorem. If not, we will do it next year. The goal is to finish this unit by Easter.