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	TRACK #1 (logs,exps)	TRACK #2 (algebra)	TRACK #3 (Functions)	TRACK #4 (Trigonometry)
5/31	Preliminaries HW notebook Notebook format Pen How to study Grading policy Cheating, etc X quiz Inventory test (takehome)	Algebra # systems N,W,Z,Q,R,C set symbols • "element-of" • "subset-of" Field properties	Linear functions Line:	<ul> <li>Distance formula</li> <li>Definition of circle</li> <li>Circle equation</li> </ul>
6/2	laws of exponents $x^m x^n = x^{m+n}$ $(x^m)^n = x^m n$ $(xy)^n = x^n y^n$ $x^1 = x$ $x^0 = 1$ (UNLESS x=0)	Order properties Order of operations Polynomials • What is a polynomial? • Degree • The polynomial number systems Z[X], Q[X],R[X] • Irreducible polynomials [see: https://en.wikipedia.org/wiki/Irr educible_polynomial Factoring natural numbers Factoring polynomials.		<ul> <li>Shifted equation of a circle</li> <li>Convert circle to vertex form</li> <li>Graph a circle</li> </ul>
6/7	<ul> <li>Exponential function def.</li> <li>F(x) = Ab<sup>x</sup>.</li> <li>Graph exponential function.</li> <li>Given 2 points, find the formula of an exponential function; then graph it</li> </ul>	Quiz 302A: Factoring natural #s An un-ordered Field: Z/(3). Order properties Trichotomy If a <b a+c<b+c<br="" then="">If a<b a-c<b-c<br="" then="">If a<b and="" c="">0, then ac &lt; bc If a<b ac="" and="" c<0,="" then=""> bc</b></b></b></b>		Announce quiz (next time) on completing the square for a circle. The Unit Circle. Unit Circle homework. Definition of sin(x) and cos(x). sin2(x) + cos2(x) = 1 assignment: Unit Circle passed out "graph cos(x)"

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6/9	Quiz: graph exponential function	Review: point-slope form of a line. Quiz 302: Field properties	<ul><li>Functions</li><li>What is a relation</li><li>What is a function</li></ul>	sin() and cos() of special angles. Define the six trig functions. Trig functions of special angles.	
		Solving inequalities Absolute value Solving absolute value inequalities Quiz 2.08: Complete the square for a circle; find center and radius. Write the equation for a circle with given center and radius.		Discuss "graphing cosine", 2 HWs.	
6/14	See HW# 29,30,31,32 More properties of	Review factoring.	Methods of defining a function	Practice: trig functions of special angles.	
	exponentials	The factor theorem.	Domain and Range	Reciprocal relations	
	Solving exponential equations by brute force	The rational root theorem.	<ul> <li>Domain Specified</li> <li>Domain Unspecified</li> <li>Algebra of functions</li> </ul>	Formula: cos(A+B) = cosAcosB-sinAsinB	
	Solving exponential equations by logarithms		Function composition		
			Verbal string method		
6/16	Logarithms Definition of logarithm	Q1.7:Factoring Graphing quadratic equations	Polynomials of degree >2 Graphing polynomials of	Proof of the cos(A+B) formula. Graphing sinusoidal functions	
	Exp. Form ← → log. Form Properties of logarithms Logs by inspection	Quadratic function skills sheet	degree >2	Equations of sinusoidal functions from their graphs Quiz 89.1: Cos(A+B)	
6/21	Q78:simple exp/log props Quiz:graph exponentials Change of base for logs Graphing logarithmic functions	<ul> <li>The vertex form of the quadratic function.</li> <li>Complete the square for a quadratic function</li> </ul>		Quiz210: Trig functions of special angles. Law of cosines Proof of law of cosines Solving a (general) triangle	

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6/23	Graphing logarithmic	Q6.1:Graph quadratic eqs	• Even & Odd functions	Law of sines (proof, use)
	functions, again		<ul> <li>fx) and f(-x) and -f(x)</li> </ul>	Proof of law of cosines
	<ul> <li>Solving logarithmic</li> </ul>	<ul> <li>Solving radical equations</li> </ul>	<ul> <li>Shifting functions</li> </ul>	Area of a (general) triangle (& proof)
	equations	<ul> <li>Solving rational equations</li> </ul>	"DQ" = difference quotient.	Solving trigonometric equations
6/28		Complex numbers. Argand plane	• "DQ", in more detail	Review law of cosines, law of sines.
			<ul> <li>DQ of cos(x), e^x</li> </ul>	Q951:Solving a (general) triangle
			Derivative	Review:
				Reciprocal relations
				Pythagorean relations
				Complement relations
				cos(A+B); sin(A+B),tan(A+B), cos(2A).
				calculate cos(15°) in two different ways
				Trigonometric identities
6/30	Quiz: graph easy log eq.		Algebraic method to find	Inverse trig. functions
	Review for big quiz on logs		function inverse.	
	and exponentials		Quiz: DQ	
7/5	Quiz: logs & exponentials		Rational functions	Comprensive quiz: Trigonometry
			Graphing rational functions	
7/7				
7/12	Course evaluation			
7/14	FINAL EXAM	FINAL EXAM	FINAL EXAM	FINAL EXAM