MAGIC CITY ACCEPTANCE

ACADEMY

** PreCalculus Pacing Guide Semester 1 **

Timeline	Unit/theme	Standard	Student Focused Objective	Resources/ Suggested Activities
		*** INSERT WHOLE STANDARD**	** make sure to use student friendly language**	** LIST ALL RESOURCES INCLUDING BOOKS, SITES, AND PLATFORMS
2 wks		20. Explain each step in solving an equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a clear-cut solution. Construct a viable argument to justify a solution method. Include equations that may involve linear, quadratic, polynomial,exponential, logarithmic, absolute value, radical, rational, piecewise, trigonometric functions, and their	- I can justify each step in solving a quadratic equation using the quadratic formula. - I can justify each step in solving a quadratic equation using the square root property. - I can justify each step in solving a quadratic equation using completing the square.	Misc. web sites and various worksheets.

		inverses.		
2 wks		24. Compare and contrast families of functions and their representations (algebraically, graphically, numerically, and verbally in terms of their key features. Note: Key features include intercepts; intervals where the function is increasing, decreasing, positive, or negative; maximums and minimums; symmetries (including even and odd); end behavior; asymptotes; and periodicity. Families of functions include but are not limited to linear, quadratic, ==polynomial==, exponential, logarithmic, absolute value, radical, rational, piecewise, trigonometric, and their inverses.	● I can find domain, range, x&y intercepts, intervals of increasing/decreasing and maximums/minimums. ● I can determine symmetry(even, odd, neither), and end behavior of polynomial functions.	Misc. web sites and various worksheets.
3 wks		27. Compose functions. Extend to ==polynomial==,	● I can combine polynomial functions (add, subtract, multiply, and divide)	Misc. web sites and various worksheets.

		trigonometric, radical, and rational functions. Example: If T(y) is the temperature in the atmosphere as a function of height, and h(t) is the height of a weather balloon as a function of time, then T(h(t)) is the temperature at the location of the weather balloon as a function of time.	● I can compose polynomial functions.	
2 wks		28. Find inverse functions.	● I can write an expression for the inverse of a function.	Misc. web sites and various worksheets.
2 wks		30. Identify the effect on the graph of replacing $f(x)$ by $f(x)+k, k \cdot f(x), f(k \cdot x)$, and $f(x+k)$ for specific values of k (both positive and negative); find the value of k given the graphs. Extend the analysis to include all trigonometric, rational, and general piecewise-defined functions with and without	● I can identify the transformations of the parent function given a graph or an equation.	Misc. web sites and various worksheets.

		technology. Example: Describe the sequence of transformations that will relate y=sin(x) and y=2sin(3x).		
3 wks		26. Graph functions expressed symbolically and show key features of the graph, by hand and using technology. Use the equation of functions to identify key features in order to generate a graph.	● I can graph basic parent functions using transformations. I can identify key characteristics of the functions (see standard 24 for key characteristics). I can graph piecewise functions. Consider teaching applications of piecewise functions.	Misc. web sites and various worksheets.
2 wks		32. Solve application-based problems involving parametric and polar equations. a. Graph parametric and polar equations. b. Convert parametric and polar equations to rectangular form	● I can convert between polar and cartesian/rectangular coordinates. ● I can solve application problems involving parametric and polar equations.	Misc. web sites and various worksheets.
1 week		19. Add, subtract, multiply, and divide rational expressions. a. Explain	● I can add, subtract, multiply and divide rational expressions.	Misc. web sites and various worksheets.

		why rational expressions form a system analogous to the rational numbers, which is closed under addition, subtraction, multiplication, and division by a nonzero rational expression.	● I can simplify complex fractions. I can find the domain of a rational expression.	
1 week		34. Define the radian measure of an angle as the constant of proportionality of the length of an arc it intercepts to the radius of the circle; in particular, it is the length of the arc intercepted on the unit circle. (Algebra II w/Statistics)	● I can define the radian measure of an angle. ● I can convert between degrees and radians.	Misc. web sites and various worksheets.