

## HPISD Curriculum: Pre Calculus Pre-AP

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Title	Estimated Duration	6 Weeks					
Unit 5: Solving Trigonometric Equations	12 days	1	<b>2</b>	3	4	5	6
<b>Unit Overview</b>							
Students solve trigonometric equations.							
<b>Generalizations/Enduring Understandings</b>							
The student will understand that:	<ul style="list-style-type: none"> <li>• Trigonometric equations can be solved using trigonometric identities and algebraic techniques.</li> <li>• The solution to a trigonometric equation can be written in general form (infinite solutions) or for a specific interval (finite solutions).</li> </ul>						
<b>Concepts</b>	<b>Guiding/Essential Questions</b>						
<ul style="list-style-type: none"> <li>• relationships</li> <li>• identity</li> </ul>	<ul style="list-style-type: none"> <li>• How do you know what trigonometric identities and/or algebraic techniques to use to solve a specific equation?</li> </ul>						
<b>Learning Targets</b>							
<ul style="list-style-type: none"> <li>• Students will select and apply trigonometric identities and algebraic techniques to solve trigonometric equations.</li> </ul>							
<b>Formative Assessments</b>				<b>Summative Assessments</b>			

<b>TEKS:</b>	<b>Processes and Skills:</b> What students should be able to DO	<b>Facts:</b> What students should KNOW
Develop and use a sinusoidal function that models a situation in mathematical and real-world problems. <b>P.2.O</b> Generate and solve trigonometric equations in mathematical and real-world problems. <b>P.5.N</b>	<ul style="list-style-type: none"> <li>Recognize when to substitute a trigonometric identity or use algebraic techniques to solve a trigonometric equation.</li> <li>Identify the appropriate quadrant(s) that a solution exists.</li> <li>Write solutions in general form and find values within a specified domain.</li> </ul>	<ul style="list-style-type: none"> <li>When solving trigonometric equations, the solution represents the angle measure(s) that satisfy the equation.</li> <li>A solution in general form represents all possible solutions to the equation.</li> <li>Sine and Cosine are parent periodic functions which repeat every <math>360^\circ</math> or <math>2\pi</math>.</li> <li>Tangent is a parent periodic function which repeats every <math>180^\circ</math> or <math>\pi</math>.</li> </ul>
<b>Topics</b>		
Solve Trigonometric Equations		
<b>Language of Instruction</b>		
general solution period	cycle reference angle	restricted domain
<b>State Assessment Connections</b>		<b>National Assessment Connections</b>
<b>Resources</b>		