

HPISD Curriculum: Algebra II								
Title		Estimated Duration	6 Weeks					
Unit 9: Rational Functions – Part 1		2 weeks	1	2	3	4	5	6
Unit Overview								
Simplify and graph rational expressions.								
Enduring Understandings								
The student will understand that:		<ul style="list-style-type: none"> Rational expressions are fractions; therefore, fraction rules apply. Equations determine the behavior of the graph including holes and asymptotes. 						
Concepts	Guiding/Essential Questions							
Rational functions	<ul style="list-style-type: none"> How is the common denominator determined? How can horizontal and vertical asymptotes be determined from the equation? How can holes be found? 							
Learning Targets								
<ul style="list-style-type: none"> Students will graph rational equations Students will simplify rational expressions 								
Formative Assessments			Summative Assessments					
Quizzes and assignments			Tests					

TEKS: Readiness Standards	TEKS: Related Supporting Standards
<p>A2.1A Identify the mathematical domains and ranges of functions and determine reasonable domain and range values for continuous and discrete situations.</p>	<p>A2.2A Use tools including factoring and properties of exponents to simplify expressions and to transform and solve equations.</p> <p>A2.10A Use quotients of polynomials to describe the graphs of rational functions, predict the effects of parameter changes, describe limitations on the domains and ranges, and examine asymptotic behavior.</p> <p>A2.10C Determine the reasonable domain and range values of rational functions, as well as interpret and determine the reasonableness of solutions to rational equations and inequalities.</p>
Processes and Skills: What students should be able to DO	Facts: What students should KNOW
<ul style="list-style-type: none"> • Graph a rational function • Simplify rational expressions • Determine holes and asymptotes from the equation 	<ul style="list-style-type: none"> • After the rational function is simplified, any number that causes the denominator to equal zero creates a vertical asymptote • Comparing the degrees of the numerator and denominator determines the horizontal asymptotes • Common denominators are required to add and subtract rational expressions
Topics	
Rational functions	
Language of Instruction	
asymptotes rational function	holes
State Assessment Connections	National Assessment Connections
Resources	
<p>McDougal Littell – Algebra 2 Supplemental material</p>	