

HPISD Curriculum: Algebra II							
Title		Estimated Duration	6 Weeks				
Unit 10: Rational Functions – Part 2		2 weeks	1	2	3	<b>4</b>	5 6
Unit Overview							
Solving rational equations and inequalities. Solving direct and inverse variation equations.							
Enduring Understandings							
<b>The student will understand that:</b>		<ul style="list-style-type: none"> <li>• Sign analysis is a technique for solving rational inequalities</li> <li>• Restrictions/extraneous solutions apply when solving rational equations</li> <li>• Rational equations are used to represent real world situations</li> </ul>					
Concepts	Guiding/Essential Questions						
functions relationships	<ul style="list-style-type: none"> <li>• How is sign analysis used to solve rational inequalities?</li> <li>• How are extraneous solutions determined?</li> <li>• How do you solve a rational equation?</li> </ul>						
Learning Targets							
<ul style="list-style-type: none"> <li>• Students will solve rational equations and inequalities.</li> <li>• Students will interpret and apply direct and inverse variation formulas.</li> </ul>							
Formative Assessments				Summative Assessments			
Quizzes and assignments				tests			

TEKS: Readiness Standards	TEKS: Related Supporting Standards
<p><b>A2.10F</b> Analyze a situation modeled by a rational function, formulate an equation or inequality composed of a linear or quadratic function, and solve the problem.</p>	<p><b>A2.10B</b> Analyze various representations of rational functions with respect to problem situations</p> <p><b>A2.10C</b> 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> <p><b>A210D</b> Determine the solutions of rational equations using graphs, tables, and algebraic methods</p> <p><b>A2.10E</b> Determine solutions of rational inequalities using graphs and tables</p> <p><b>A2.10G</b> Use functions to model and make predictions in problem situations involving direct and inverse variation</p>
Processes and Skills: What students should be able to DO	Facts: What students should KNOW
<ul style="list-style-type: none"> <li>• Solve a rational equation</li> <li>• Solve a rational inequality</li> <li>• Interpret and apply direct and inverse variation formulas</li> </ul>	<ul style="list-style-type: none"> <li>• The process of using sign analysis to solve a rational inequality</li> <li>• The denominator is used to locate extraneous solutions</li> <li>• Direct variation is <math>y = kx</math></li> <li>• Indirect variation is <math>y = k/x</math></li> </ul>
Topics	
Rational equations and inequalities	Direct and inverse variation
Language of Instruction	
Sign analysis Direct and inverse variation	Extraneous solutions
State Assessment Connections	National Assessment Connections
Resources	
<p>McDougal Little – Algebra 2 Supplemental material</p>	