

Common Core State Standards for Mathematics		
Domain: Arithmetic with Polynomials and Rational Expressions		
Rational Expressions (A-APR.6-7)		
High School		
Score		Example Activities
Score 4.0	<p><b>In addition to Score 3.0, in-depth inferences and applications that go beyond instruction to the standard. The student will:</b></p> <ul style="list-style-type: none"> <li>write <math>a(x)/b(x)</math> in the form <math>q(x) + r(x)/b(x)</math> where <math>a(x)</math>, <math>b(x)</math>, <math>q(x)</math> and <math>r(x)</math> are polynomials with the degree of <math>r(x)</math> less than the degree of <math>b(x)</math> using synthetic division or for more complicated expressions use a computer algebra system (A-APR.6)</li> </ul>	
	3.5   In addition to score 3.0 performance, in-depth inferences and applications with partial success.	
Score 3.0	<p><b>The student will:</b></p> <ul style="list-style-type: none"> <li>write <math>a(x)/b(x)</math> in the form <math>q(x) + r(x)/b(x)</math> where <math>a(x)</math>, <math>b(x)</math>, <math>q(x)</math> and <math>r(x)</math> are polynomials with the degree of <math>r(x)</math> less than the degree of <math>b(x)</math> using inspection or long division (A-APR.6)</li> <li>understand that rational expressions form a system analogous to the rational numbers. (A-APR.7)</li> <li>add, subtract, multiply and divide rational expressions (A-APR.7)</li> </ul> <p><b>The student exhibits no major errors or omissions.</b></p>	<p><u>Rational Expression Operations</u> – Students will be grouped in threes. The class will be split into three four different areas. The four areas will represent addition, subtraction, multiplication, and division. The class will be evenly split into the four areas. All students will be given a set of twelve rational expressions to perform the specified operation based on the area they are located. All students are given the same expressions but will perform a different operation at each station. At the conclusion of all rotations, students will be required to compare and contrast the difference in solutions from each of the four stations and make generalizations as to how each operation impacted the expressions.</p>
	2.5   No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content	
Score 2.0	<p><b>There are no major errors or omissions regarding the simpler details and processes as the student will:</b></p> <ul style="list-style-type: none"> <li>recognize or recall specific vocabulary, such as: <ul style="list-style-type: none"> <li></li> </ul> </li> <li>perform basic processes, such as: <ul style="list-style-type: none"> <li>recognize common denominators for rational expressions (A-APR.7)</li> </ul> </li> </ul> <p><b>However, the student exhibits major errors or omissions regarding the more complex ideas and processes.</b></p>	<p>Students will work individually and will be given a set of rations expressions. The students will be given a list of possible common denominators. The students will recognize which of the possible common denominators is correct for each set of rational expressions.</p>
	1.5   Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content	
Score 1.0	<p><b>With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.</b></p>	
	0.5   With help, a partial understanding of the 2.0 content but not the 3.0 content	
Score 0.0	<p><b>Even with help, no understanding or skill demonstrated.</b></p>	