Unit 02: Accelerated: Rational Functions

Content Area: **Math**
Course(s): **Generic Course**
Time Period: **Marking Period 2**
Length: **4 weeks**
Status: **Published**

Unit Introduction

Standards

MA.F-IF.B.5	Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes.
MA.F-IF.B.6	Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.
MA.F-IF.C.7b	Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions.
MA.F-IF.C.7d	Graph rational functions, identifying zeros and asymptotes when suitable factorizations are available, and showing end behavior.

Essential Questions

Content

- 2.6 Rational Functions: pg 168
- 2.7 Nonlinear Inequalities: pg 180
- 7.4 Partial Fractions: pg 500

Skills

- Find partial fraction decompositions of rational expressions
- Find the domains of rational functions
- Find the vertical and horizontal asymptotes of the graphs of rational functions
- Recognize partial fraction decompositions of rational expressions
- Sketch the graphs of rational functions
- Sketch the graphs of rational functions that have slant asymptotes
- Solve polynomial inequalities
- Solve rational inequalities

- Use inequalities to model and solve real-life problems
- Use rational functions to model and solve real-life problems