Expectations

1.1 The student will represent functions and relations numerically, graphically, and algebraically.
1.2 The student will describe and apply properties of functions and relations.
1.4 The student will use numerical, algebraic, and graphical representations of functions and relations in order to solve real-world problems.

Essential Question

How do rational functions model real-world problems and their solutions?

Enduring Understanding

The characteristics of rational and radical functions and their representations are useful in solving real-world problems.

Indicators

1.1.A2.4 write a rational function or expression in the form $\frac{1}{x^n}$ as an equivalent power function or expression.

1.1.A2.15 graph rational functions with numerators and/or denominators that are linear polynomials and describe their properties.

1.1.A2.17 write a rational function or expression in equivalent form.

1.2.A2.8 describe the properties of rational functions with numerators and/or denominators that are linear polynomials, including domain, range, continuity, end behavior, horizontal asymptotes, and vertical asymptotes.

1.4.A2.4 solve rational equations with linear denominators graphically, numerically, and algebraically.

1.4.A2.13 interpret and solve problems involving rational equations, including inverse and combined variation.