

NAME: _____

P.I. A.A.16: Simplify fractions with polynomials in the numerator and denominator by factoring both and renaming them to lowest terms

1. What is a rational expression?

2. Explain how to verify that $\frac{x^2 + 10x + 25}{x + 5} = x + 5$, if $x \neq -5$, using a graphing calculator.

A rational expression is an expression that can be written in the form $\frac{\text{polynomial}}{\text{polynomial}}$, where a variable is in

[1] the denominator.

Answers may vary. Graph the function $y_1 = \frac{x^2 + 10x + 25}{x + 5}$. Then graph $y_2 = x + 5$. One graph will be

[2] superimposed on the other to show that they are the same.
