

Exploring Rational Functions

Name: _____

Find the domain of the following rational functions.

1. $\frac{-3x+1}{x+1}$

2. $\frac{x^2+5x+6}{x^2+6x+9}$

Find the zeros of the following:

3. $\frac{x^3-x}{x^2+2x}$

4. $\frac{x^2+4x+4}{x^2}$

Describe the vertical asymptotes of the following:

5. $\frac{3x^2+6x}{(x^2+x)}$

6. $\frac{x^2+6x+8}{x^2-2x-8}$

Describe the horizontal asymptotes of the following:

7. $\frac{1}{x^3}-1$

8. $\frac{x^2-9}{x^2+7x+12}$