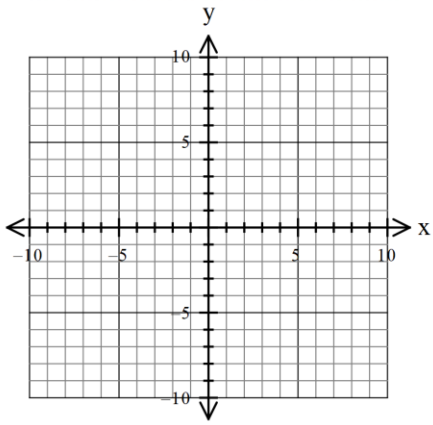
Parent Functions #7

Name of Graph: _____

Equation: _____

x	$f(x)$



Key Features

Domain:

Range:

x-intercept(s):

y-intercept:

Increasing:

Decreasing:

Constant:

Positive:

Negative:

Maximums /Minimums

Symmetry:

End Behavior:

$\lim_{x\to-\infty} f(x) =$

$\lim_{x\to\infty} f(x) =$

$\lim_{x\to0^-} f(x) =$

$\lim_{x\to0^+} f(x) =$

Vertical Asymptote:

Horizontal Asymptote:

Restrictions:

Transformation equation:

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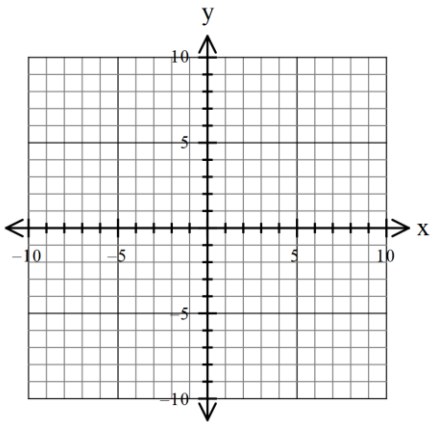

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Steps for solving a rational equation:

EX. $\frac{1}{x-7}+\frac{x}{x-2}=\frac{5}{x^2-9x+14}$

1. Factor the denominator to find LCD
2. Multiply numerator and denominator of each term to make LCD
3. Multiply entire equation by LCD to get rid of denominator
4. Solve for variable. You might need to factor.
5. Find the restrictions and compare the answers.

Steps for finding the restrictions:

1. Factor denominator
2. set denominator equal to zero since you can't divide by zero.
3. Solve for the variable.

EX. $\frac{y+2}{y}-\frac{y-3}{y}=7$

Steps for solving a rational equation:

EX. $\frac{1}{x-7}+\frac{x}{x-2}=\frac{5}{x^2-9x+14}$

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Steps for finding the restrictions:

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EX. $\frac{y+2}{y}-\frac{y-3}{y}=7$