

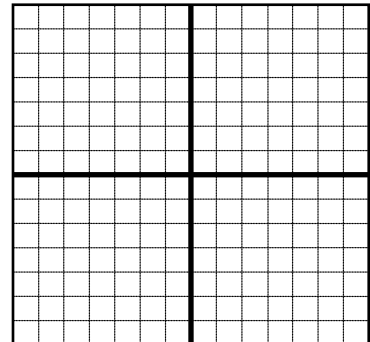
**Rational Functions (2.6)**

<b>Graphing Rational Functions</b>	<b>A functions with a variable in the denominator of a fraction:</b> $f(x) = \frac{p(x)}{q(x)} = \frac{ax^m + \dots + b}{cx^n + \dots + d}$
1) <i>Symmetry</i>	
2) <i>y-intercept</i>	
3) <i>x-intercept</i>	
4) <i>Vertical Asymptote</i>	
5) <i>Horizontal or Slant Asymptote</i>	
6) <i>Extra Points</i>	
7) <i>Graph</i>	

Degree Comparison	Alternate Asymptote

**Graphing Rational Functions:** Follow the seven step process to graph each rational function.

1.  $f(x) = \frac{2x^2 - x - 1}{x^2 - 4}$



**Symmetry:**

**y-intercept:**

**x-intercept:**

**Vertical asymptote(s):**

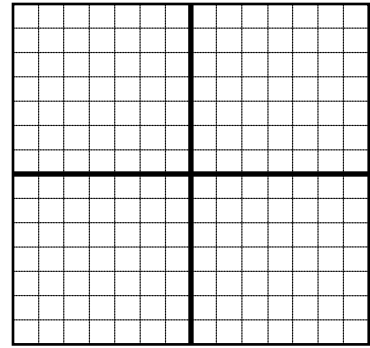
**Horizontal asymptote:**

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

**Symmetry:**

**y-intercept:**

**x-intercept:**



**Vertical asymptote(s):**

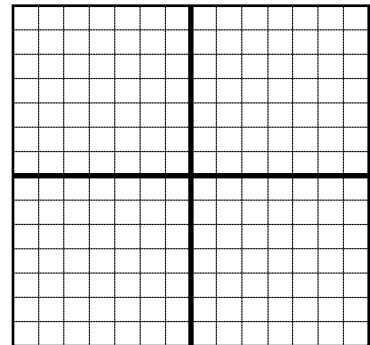
**Horizontal asymptote:**

3.  $f(x) = \frac{x^2-2x+1}{x-3}$

**Symmetry:**

**y-intercept:**

**x-intercept:**



**Vertical asymptote(s):**

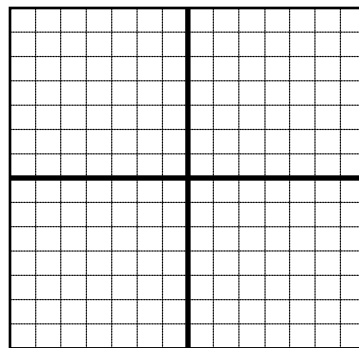
**Slant asymptote:**

4.  $f(x) = \frac{4x^2}{2x^2 + 1}$

**Symmetry:**

**y-intercept:**

**x-intercept:**



**Vertical asymptote(s):**

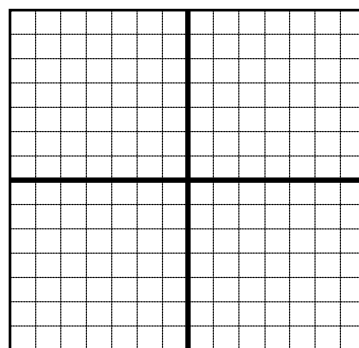
**Horizontal asymptote:**

5.  $f(x) = \frac{x - 2}{x^2 + x - 6}$

**Symmetry:**

**y-intercept:**

**x-intercept:**



**Vertical asymptote(s):**

**Alternate asymptote:**