

## Graphing Rational Functions/Quadratics

1. Find all relevant information about the following function, then graph.

$$f(x) = \frac{(x-1)(3x+6)}{2x^2-2}$$

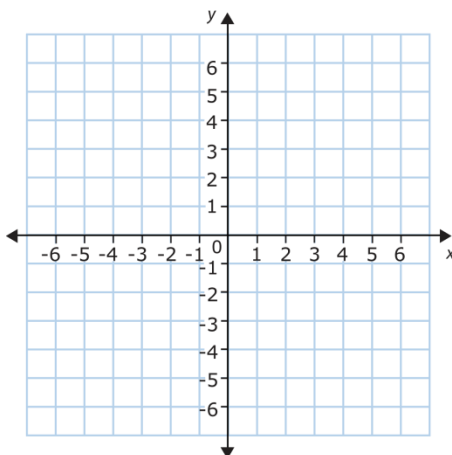
Domain:

Hole(s):

Vertical Asymptote:

Horizontal Asymptote:

x-intercept (there's only one):



Solve in whatever way you feel is easiest.

2.  $x^2 - 3x - 3 = 0$

3.  $-3x^2 + x + 2 = 0$

4.  $x^2 - 6x + 5 = 0$

5.  $x^2 + 6x + 9 = 2$

Use the quadratic formula to find the zeros (or, in other words, the  $x$ -intercepts) of the quadratics below. Then graph each parabola.

6.  $f(x) = x^2 - 5x + 1$

7.  $g(x) = -2x^2 + x + 4$

