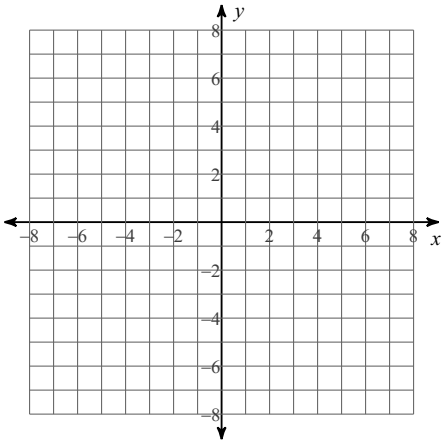
Algebra 2 Honors - Mr. Allen-Black Name_____ ID: 1

Rational Graphing Practice Problems

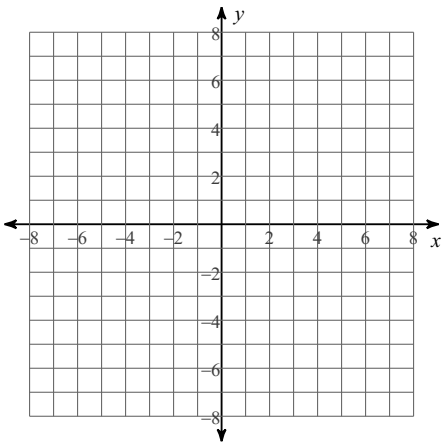
Date_____ Period____

Identify the holes, vertical asymptotes, x-intercepts, y-intercepts, horizontal asymptote, and domain of each. Then sketch the graph.

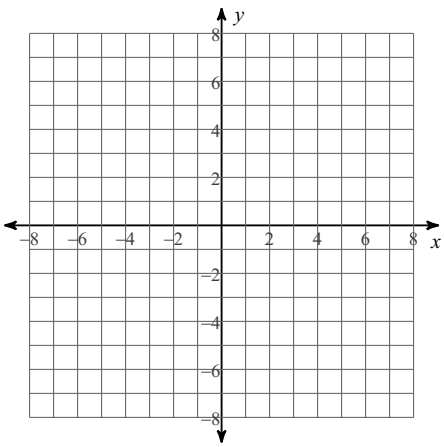
1) $f(x) = -\dfrac{4}{x+4}$



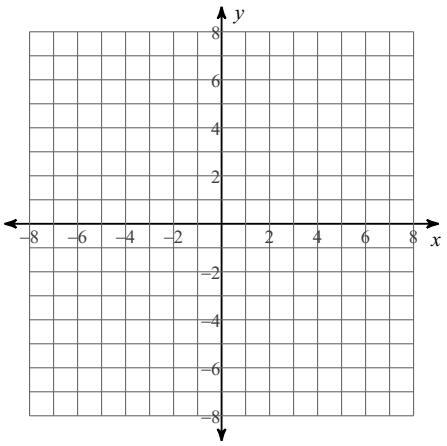
2) $f(x) = \dfrac{x^2 - 2x - 8}{2x^2 + 4x - 6}$



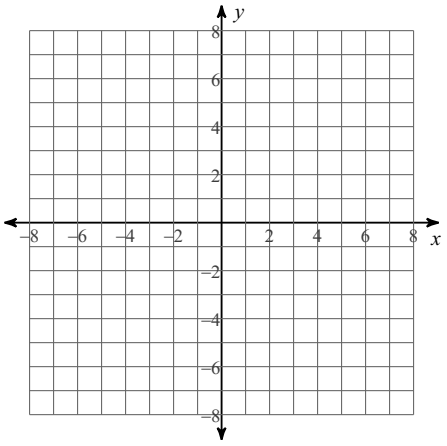
3) $f(x) = \dfrac{x^2 - x}{2x^2 - 2x - 12}$



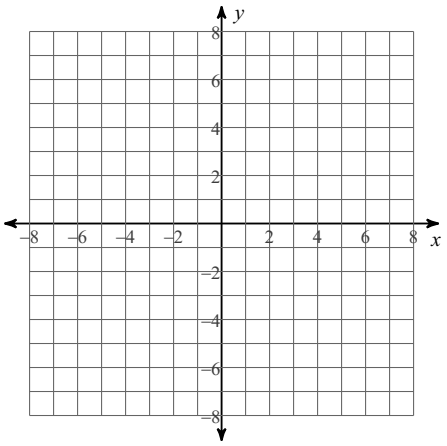
4) $f(x) = \dfrac{x^2 + 2x - 8}{-x^2 + 3x - 2}$



5) $f(x) = \dfrac{x^2 - 3x}{3x^2 + 6x - 9}$

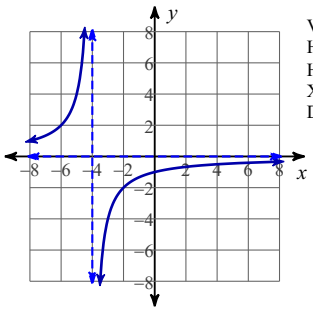


6) $f(x) = \dfrac{x^2 - 6x + 8}{x^2 - 5x + 4}$



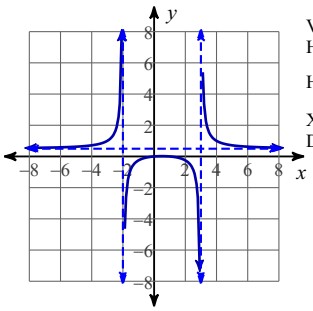
Answers to Rational Graphing Practice Problems (ID: 1)

1)



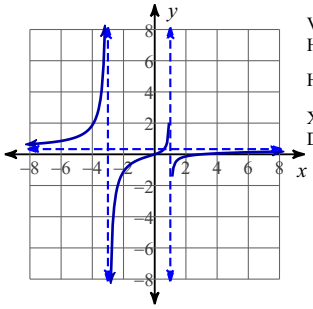
Vertical Asym.: $x = -4$
Holes: None
Horz. Asym.: $y = 0$
X-intercepts: None
Domain:
All reals except -4

3)



Vertical Asym.: $x = 3$, $x = -2$
Holes: None
Horz. Asym.: $y = \frac{1}{2}$
X-intercepts: 0, 1
Domain:
All reals except 3, -2

5)



Vertical Asym.: $x = 1$, $x = -3$
Holes: None
Horz. Asym.: $y = \frac{1}{3}$
X-intercepts: 0, 3
Domain:
All reals except 1, -3