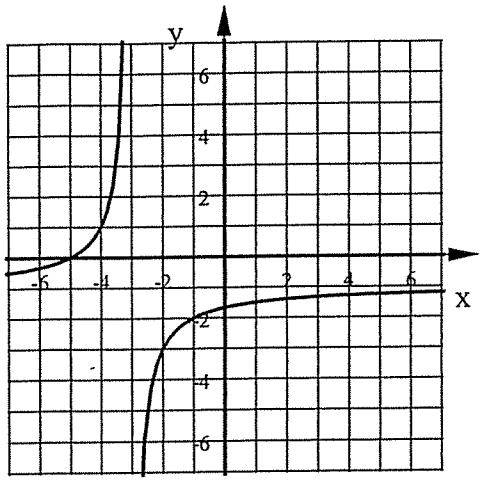
Algebra 2 Chapter 9 Final Exam Review Spring 2016

1. Find all points of discontinuity and state if they are holes or vertical asymptotes. $y = \frac{x^2 - 16}{x^2 - x - 12}$

2. Write the equation of the Horizontal Asymptote, if any.

a) $y = \frac{6x^2 + 10x - 3}{2x^2 - 5x + 1}$ b) $y = \frac{14x + 3}{7x^2 - 4x - 5}$ c) $y = \frac{8x^3 + 9x - 4}{2x^2 + 3x + 4}$

3. Write the equation of this graph which is a transformation of $y = \frac{2}{x}$



4. Solve each rational equation.

a) $\frac{5}{x+3} = \frac{2x}{x^2+5x+6} + \frac{7}{x+2}$ b) $\frac{2x^2 - 6x - 18}{x^2 + 3x + 2} + \frac{4}{x+1} = \frac{x}{x+2}$

5. Use this function: $y = \frac{x^2 + 2x - 3}{x^2 - 2x - 24} = \frac{(x+3)(x-1)}{(x-6)(x+4)}$

a) State all x-intercepts, if any. b) State all y-intercepts, if any.

Algebra 2 Ch 9 Final Exam Review Answers Spring 2016

1. Hole at $x = 4$ VA at $x = -3$
2. a) $y = 3$ b) $y = 0$ c) *NO HA*
3. $y = \frac{-2}{x+3} - 1$
4. a) $x = \frac{-11}{4}$ b) $x = 5$
5. a) $x - int = -3, 1$ b) $y - int = \frac{3}{24} = \frac{1}{8}$