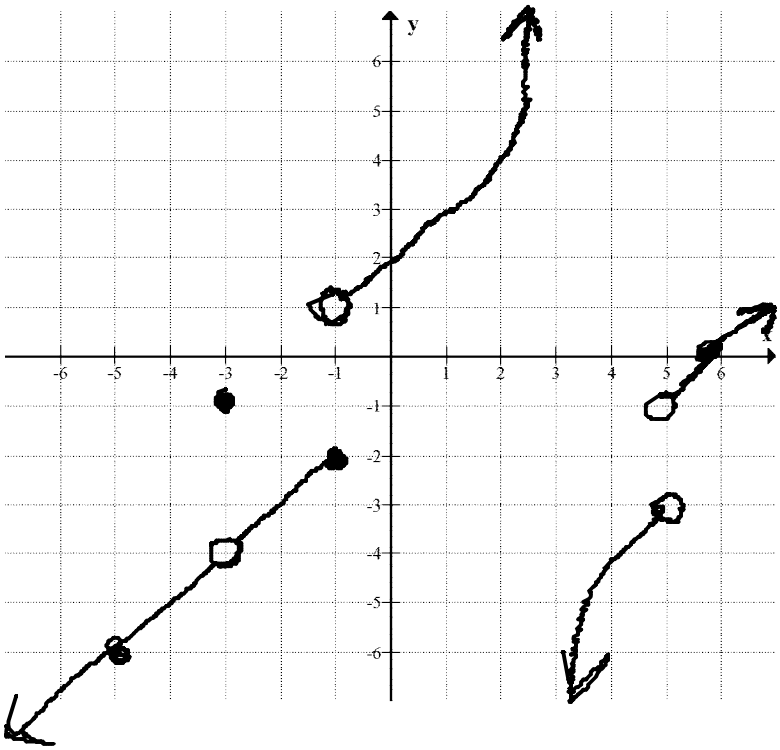
C12 - 1.1 - Limits Hmk

Find the Limits. If all equal say Continuous.



$y = f(x)$

$\lim_{x \to -5^-} f(x) =$ $\lim_{x \to -5^+} f(x) =$ $\lim_{x \to -5} f(x) =$ $f(-5) =$

$\lim_{x \to -3^-} f(x) =$ $\lim_{x \to -3^+} f(x) =$ $\lim_{x \to -3} f(x) =$ $f(-3) =$

$\lim_{x \to -1^-} f(x) =$ $\lim_{x \to -1^+} f(x) =$ $\lim_{x \to -1} f(x) =$ $f(-1) =$

$\lim_{x \to 3^-} f(x) =$ $\lim_{x \to 3^+} f(x) =$ $\lim_{x \to 3} f(x) =$ $f(3) =$

$\lim_{x \to 5^-} f(x) =$ $\lim_{x \to 5^+} f(x) =$ $\lim_{x \to 5} f(x) =$ $f(5) =$

C12 - 1.2 - Limits WS

Find the Limits

$\lim_{x \to 3} \quad x + 2 =$

$\lim_{x \to 5} \quad 2x^2 + 1 =$

$\lim_{x \to -2} \quad \frac{1}{x + 2} =$

x	*y*
-100	
-2.1	
-2.01	
-2.001	
-2	
-1.999	
-1.99	
-1.9	
100	

$\lim_{x \to 3} \quad \frac{x + 3}{x^2 - 9} =$

x	*y*
-100	
2.9	
2.99	
2.999	
3	
3.001	
3.01	
3.1	
100	

$\lim_{x \to 3} \quad \frac{x^2 - 5x + 6}{x - 3} =$

$\lim_{x \to 4} \quad \frac{x^3 - 16x}{x - 4} =$

$\lim_{x \to \frac{1}{2}} \quad \frac{2x^2 + 5x - 3}{2x - 1} =$

$\lim_{x \to 2} \quad \frac{x^3 - 8}{x^2 - x - 2} =$

C12 - 1.2 - Limits WS

Find the Limits

$\lim_{x \to 16} \dfrac{x - 16}{4 - \sqrt{x}}$

$\lim_{x \to 6} \dfrac{\sqrt{x + 3} - 3}{x - 6}$

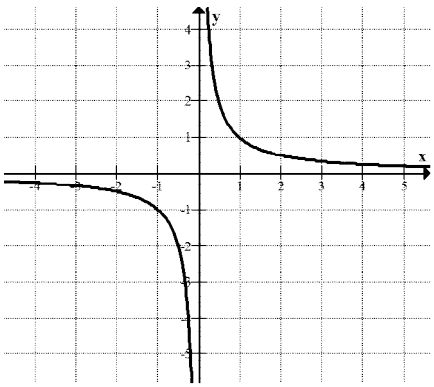
$\lim_{x \to 0} \dfrac{\dfrac{1}{x + 2} - \dfrac{1}{2}}{x}$ $LCD = 2(x + 2)$

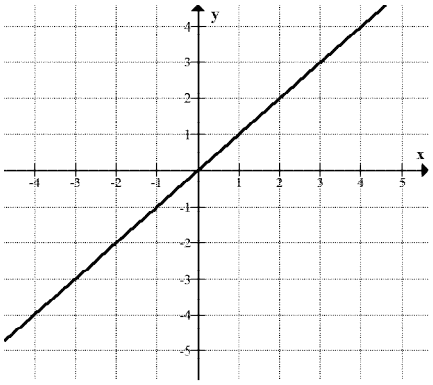
$\lim_{x \to 0} \dfrac{\dfrac{1}{(x + 2)^2} - \dfrac{1}{4}}{x}$

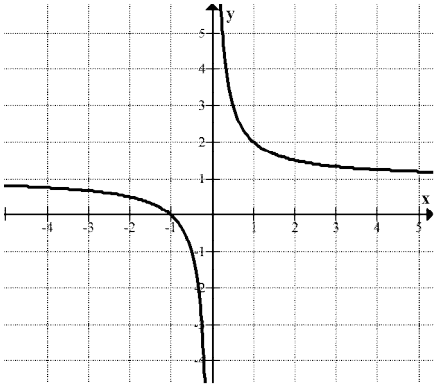
$\lim_{x \to 4} \dfrac{\dfrac{1}{\sqrt{x}} - \dfrac{1}{2}}{x - 4}$

C12 - 1.3 - Horizontal Asymptote HW

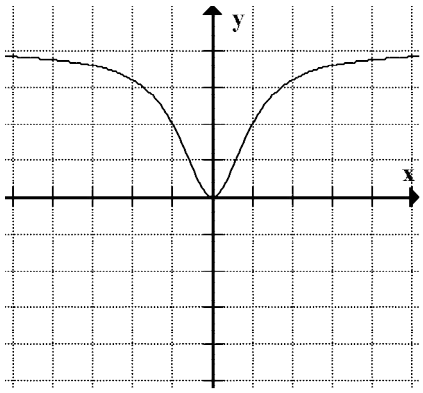
Find the equation of the Horizontal Asymptote

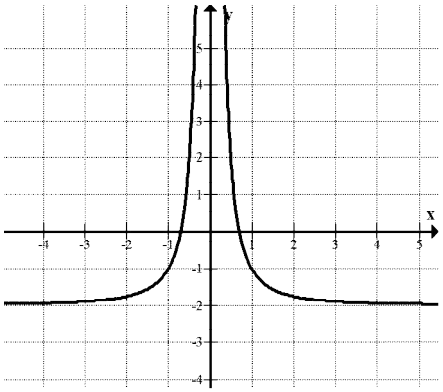


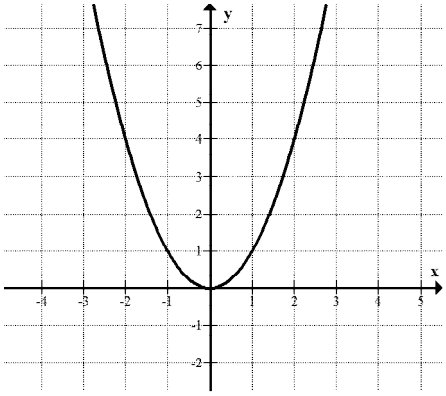




$y =$







C12 - 1.3 - Horizontal Asymptote WS

Find the equation of the horizontal asymptote. Divide top and bottom by highest exponent of x in denominator

$\lim_{x \to \infty} \dfrac{x - 1}{x^2 + x}$

$\lim_{x \to -\infty} \dfrac{x + 2}{x^2 + x + 1}$

$\lim_{x \to \infty} \dfrac{2x^2 + 2}{5x^2 + x + 1}$

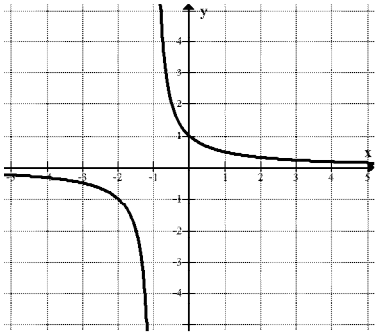
$\lim_{x \to \infty} \dfrac{2x^3 - 1}{3x^2 + 1}$

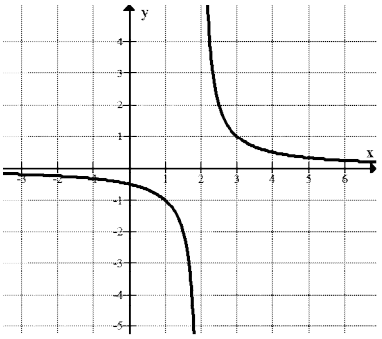
$\lim_{x \to \infty} \dfrac{3x^2 - 1}{x - 2}$

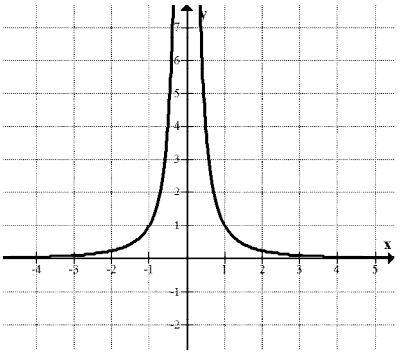
$\lim_{x \to \infty} \dfrac{4x^3 + 2x}{x^2 - 5}$

C12 - 1.4 - Vertical Asymptote HW

Find the equation of the Vertical Asymptote







$x =$

Find the equation of the Vertical Asymptote

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

$x =$

$f(x) = \frac{x+1}{(x-2)(x+4)}$ $f(x) = \frac{2}{(x^2+4x-5)}$ $f(x) = \frac{1}{x^2+3}$

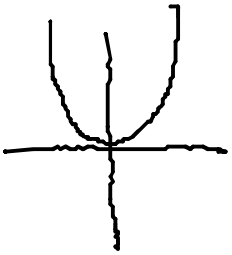
9.4 *Find the VA's and/or Holes*

$f(x) = \frac{x^2-1}{x-1}$ $f(x) = \frac{x^2+6x+5}{x+5}$ $f(x) = \frac{x^2-4x}{2x}$ $f(x) = \frac{2x^2+7x+6}{x+2}$

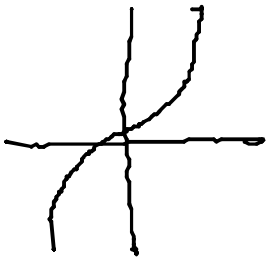
$f(x) = \frac{x+3}{x^2-9}$ $f(x) = \frac{x^2}{x^2-4}$ $f(x) = \frac{2x^2-5x-3}{2x^2+5x+2}$

C12 - 1.5 - Functions Symmetry Hmk

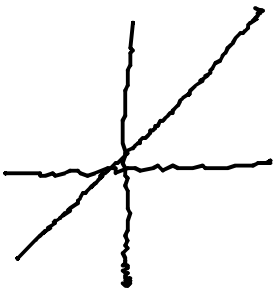
Determine if the function is even, odd, or neither.



$f(x) = x^2$



$f(x) = x^3$



$f(x) = x$

$f(x) = x^2 + 1$

$f(x) = x^3 + 1$

$f(x) = x + 1$

$f(x) = x^4$

$f(x) = \sqrt{x}$

$f(x) = \sqrt{x^2 + 2}$

$f(x) = x^2 + x$

$f(x) = x^3 + x$

$f(x) = \frac{1}{x}$

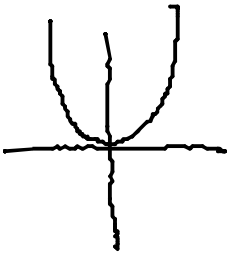
$f(x) = \frac{x^2}{x^2 + 1}$

$f(x) = \frac{1}{x - 1}$

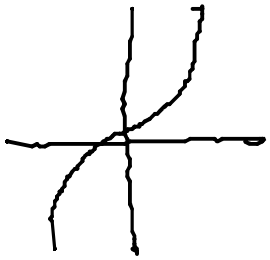
$f(x) = \frac{x^3}{x^2 - 1}$

C12 - 1.6 - One-to-One Functions Hmk

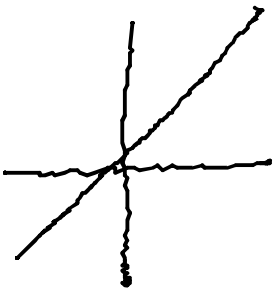
Determine if the function is even, odd, or neither.



$f(x) = x^2$



$f(x) = x^3$



$f(x) = x$

$f(x) = x^2 + 1$

$f(x) = x^3 - 1$

$f(x) = x + 1$

$f(x) = \frac{1}{x}$

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

$f(x) = -x^3$

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

$f(x) = e^x$

$f(x) = logx$

$f(x) = |x|$

$f(x) = sinx$

$f(x) = intx$

C12 - 1.7 - Inverse Function Hmk

Determine if the function has an inverse function

$f(x) = x + 2$

$f(x) = x^2$

$f(x) = x^3$

$f(x) = \frac{1}{x}$

$f(x) = x^2, x \geq 0$

$y = \frac{1}{x-2} + 2$

Determine the inverse function.

$f(x) = x + 2$

$f(x) = x^2$

$f(x) = x^3$

$f(x) = \frac{1}{x}$

$f(x) = x^2, x \geq 0$

$y = \frac{1}{x-2} + 2$