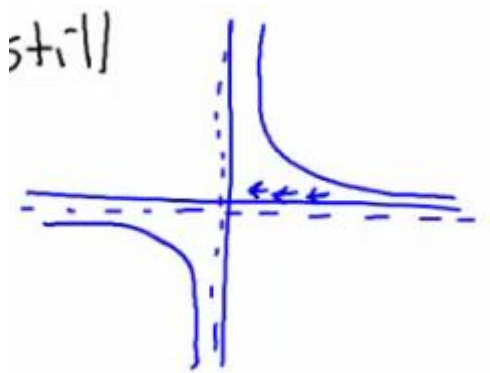


Infinite Limits

We say that $f(x)$ has the limit L as x approaches infinity and write $\lim_{x \rightarrow \infty} f(x) = L$,

Infinite limits -

Ex.)



Vertical Asymptotes -

Horizontal Asymptotes -

Ex. $\lim_{x \rightarrow 3^+} \frac{1}{x-3}$

Math 141 - Calculus
Section 2.6 Video Worksheet

Name _____

$$\text{Ex. } \lim_{x \rightarrow -5^-} \frac{3x}{2x+10}$$

$$\text{Ex. } \lim_{x \rightarrow 0} \frac{1}{x^{2/3}}$$

$$\text{Ex. } \lim_{x \rightarrow 0} \frac{-1}{x^2(x+1)}$$

$$\text{Ex. } \lim_{x \rightarrow \left(-\frac{\pi}{2}\right)^+} \sec x =$$

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

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

$$\lim_{x \rightarrow 1^+} f(x)$$

$$\lim_{x \rightarrow 1^+} f(x)$$

$$\lim_{x \rightarrow 1^-} f(x)$$

$$\lim_{x \rightarrow 1^-} f(x)$$

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

$$\lim_{x \rightarrow -1^-} f(x)$$

Try It:

$$f(x) = \frac{4}{(x-7)^2}$$

$$\lim_{x \rightarrow 7^+} f(x)$$

$$\lim_{x \rightarrow 7^-} f(x)$$