Math 141 - Calculus Name_____

Section 4.6 Video Worksheet

Infinite Limits

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

Infinite limits -

Ex.)

Vertical Asymptotes -

Horizontal Asymptotes -

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

Math 141 - Calculus Name_____

Section 4.6 Video Worksheet

Ex. $\lim_{x\to -5^-} \dfrac{3x}{2x+10}$

Ex. $\lim_{x\to 0} \dfrac{1}{x^{2/3}}$

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

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

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

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

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

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

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

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

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

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