Subject: Calculus
Created by: Isaac Viegas
Revised: 03/28/2018

Limits to Infinity

Summary:

lim –

lim $\frac{\text{powerofx}}{\text{samepowerofx}}$ $\frac{\text{coefficientoflargestx}}{\text{coefficientoflargestx}}$

lim $\frac{\text{smallerpowerofx}}{\text{largerpowerofx}}$

lim $\frac{\text{largerpowerofx}}{\text{smallerpowerofx}}$

Check every term for a higher power of x—most exams have at least one trick question to make sure that you are paying attention!

Double-check whether your limit is to ∞ or to -∞.

You will see this everywhere: lim – It is important to remember this. Similarly, –

and – – .

Common Cases:

Both top and bottom have the same highest power of x:

lim +x +x lim – –

*Be careful! x+ +x +x =x +x +x+

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With square roots:

$$\lim$$

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