

# Reading Assignment for Section 2.4

MATH 130: Calculus I, Section 4

Spring Semester 2017

**Follow the general guidelines for the Reading Assignment (the salmon colored handout).**

Be sure to include and label all four standard parts 1,2,3,4 of the Reading Assignment in what you hand in. Be sure to **staple** together pages if you have more than one, and include your **name** at the top of the page. Neatness is appreciated!!!

**Due:** at the beginning of class on Wednesday, February 8th

Read:

Section 2.4: Infinite Limits, pages 79-85

Notes:

What does it mean when the limit of a function goes to infinity? Find out in these pages of the text! See what these infinite limits have to do with vertical asymptotes!

**Remember that your answers should include complete sentences for every question. Be sure to answer all parts of each question!**

Reading Questions for part (1), Response:

a) Use a graph to explain the meaning of  $\lim_{x \rightarrow a} f(x) = \infty$ .

b) What is a vertical asymptote? Does what the book says correspond to your past knowledge of vertical asymptotes? Compare your past definition with the one in the text.

c) Suppose  $a$  is a constant and  $f$  and  $g$  are two functions such that  $g(a) = 0$ . Consider the function  $H(x) = \frac{f(x)}{g(x)}$ . Does  $H$  necessarily have a vertical asymptote at  $x = a$ ? Explain your reasoning.

Remember parts 2-4 on the salmon handout!