

**Written Homework Problems §2.2**

24 problems for 48 points

§2.2 # 36,39,46-49,59-64,68-76

Problem A: Make a table of values to determine  $\lim_{x \rightarrow 4} \frac{\ln(x) - \ln(4)}{x - 4}$ .

Problem B: Determine the limits below. *Justify* your answers.

(1)  $\lim_{x \rightarrow -3^-} \frac{4x}{x + 3}$

(2)  $\lim_{x \rightarrow 4^+} \ln(x^2 - 16)$

Problem C: Find any vertical asymptotes of  $f(x) = \frac{x + 2}{x(x - 3)}$  and *justify* your answers using limits.