

Homework 2

1. Find the limit (if it exists).

$$\lim_{x \rightarrow 0} \frac{\sin x}{5x}$$

2. Find the vertical asymptotes

$$f(x) = \frac{3x + 4}{x^2 - 16}$$

3. Find the derivative by the limit process

$$f(x) = \frac{1}{x - 1}$$