

Your name: \_\_\_\_\_

MTH 132-020

Calculus I

F18

Quiz 1

Compute each of the following limits:

Each answer needs to be a real number,  $+\infty$ ,  $-\infty$  or DNE)

1.  $\lim_{x \rightarrow 0^-} -\frac{1}{x^2}$

2. Let

$$f(x) = \begin{cases} x^3 & \text{if } x < 0 \\ 1 & \text{if } x = 0 \\ \sin\left(\frac{1}{x}\right) & \text{if } x > 0 \end{cases}$$

(a)  $\lim_{x \rightarrow 0^+} f(x)$

(b)  $\lim_{x \rightarrow 0^-} f(x)$

3.  $\lim_{x \rightarrow 2} \frac{x-2}{x^2-x-2}$

4.  $\lim_{x \rightarrow 9} \frac{\sqrt{x}-3}{x-9}$