Quiz 1   MAC-2281 Spring 2019   **Name:** _____

To receive credit you MUST SHOW ALL YOUR WORK.

1. (8 pts) Compute each of the following limits. If the limit does not exist or is infinite, specify so.

(a) $\displaystyle\lim_{x\to-5^-}\ \frac{1+x}{x+5}$

(b) $\displaystyle\lim_{x\to2}\frac{x-2}{x^2-5x+6}$

(c) $\displaystyle\lim_{x\to-\infty}\frac{3x^2-2}{x^2-7x+2}$

(d) $\displaystyle\lim_{x\to+\infty}\sqrt{x^2-x}-x$

2. (2 pts) Give an example of a function $f(x)$ that is continuous for all values of x except $x=2$, where it has a removable discontinuity. Briefly explain how you know that your example $f(x)$ is discontinuous at $x=2$ and how you know that the discontinuity is removable.