

1. If $f(x) = \frac{\sqrt{5+x} - \sqrt{5}}{x}$,
 - a. find $\lim_{x \rightarrow 0^+} f(x)$,
 - b. find $\lim_{x \rightarrow 0^-} f(x)$,
 - c. find $f(0)$.
2. If $f(x) = \frac{x^2 - 3x}{x}$,
 - a. find $\lim_{x \rightarrow 0} f(x)$;
 - b. find $f(0)$,
 - c. sketch the graph of f ,
 - d. determine if f is continuous at $x = 0$? explain.
3. If $f(x) = \frac{(2x+1)(x-1)x}{x}$,
 - a. find $\lim_{x \rightarrow 0} f(x)$,
 - b. find $\lim_{x \rightarrow 1} f(x)$,
 - c. find $f(0)$,
 - d. sketch the graph of f ,
 - e. determine if f is continuous at $x = 0$? explain.
 - f. determine if f is continuous at $x = 1$? explain.
4. Do problem 5 from <http://www.radford.edu/~wyang/151s00/p5/test2.htm>.