

MA 140 - Reading Assignment 1 - Section 1.2 - Fall 2008

They call me _____

- True or False:** If you are interested in the behavior of a function at a particular x -value, all you need to do is plug that x -value into the function, and then you will know everything you need to know about that function near that x -value.
- True or False:** The notion of limit given in this section is a very precise definition and will not be pinned down in more precise terms later.
- To indicate that x is approaching a from the left, we use the notation:
 - $x \rightarrow a$
 - $x \rightarrow a^+$
 - $x = a^-$
 - $x \rightarrow a^-$
 - !@#\$%#&^*(#&#\$%#&#@)
- Translate the following statement into mathematical symbols: "The limit of $f(x)$ as x approaches 5 equals -3 ."
- True or False:** When determining a limit, we are interested in the behavior of the function *near* a point, not *at* a point.
- Suppose when we take values for x that get closer and closer to 3 (with $x < 3$), the values for $f(x)$ get larger and larger without bound. Then we say $\lim_{x \rightarrow 3^-} f(x)$ _____.
- If $\lim_{x \rightarrow -1^-} f(x) = 7$ and $\lim_{x \rightarrow -1^+} f(x) = 7$, then $\lim_{x \rightarrow -1} f(x) =$ _____.
- True or False:** Let a be a real number. If $\lim_{x \rightarrow a^-} f(x)$ and $\lim_{x \rightarrow a^+} f(x)$ do not have a common value, then $\lim_{x \rightarrow a} f(x)$ does not exist.
- True or False:** All limits can be resolved by using algebraic methods.
- As suggested by Example 2.4, $\lim_{x \rightarrow 0} \frac{\sin x}{x} =$
 - 0
 - -1
 - 1
 - does not exist
 - terminal velocity