Reflection 5/22/17

Today's lesson introduced the concept of a limit. Probably the single biggest idea is that *a limit captures the behavior of a function near a certain point*. If there is some (very specific) regularity to this behavior, then the limit exists. As we saw in class, we write $\lim_{x \to 4} f(x) = 7$ if the function $f(x)$ approaches 7 as x approaches 4. We read this as, "the limit of *f* of *x* as *x* approaches 4 is 7." This doesn't necessarily mean that $f(4) = 7$ although it could be true.

Limits can arise in a variety of contexts:

geometry (a secant line approaching a tangent line)

physical situations such as a falling ball or a speeding Corvette (finding average velocity on an interval versus an instantaneous velocity at a precise moment in time)