Quiz 5

Name: _____

1. Give the mathematical definition for a function $f(x)$ to be continuous at $x = x_0$.

   see notes or book for the definition.

2. True or false: linear functions are continuous.

   True. The graph is a straight line. Or, they are special instances of polynomials.

3. List at least three values of t where $\tan(t)$ is discontinuous. Why is it discontinuous at these places?

   $\tan(t)$ is discontinuous when $\cos(t) = 0$, which happens at infinitely many t-values; any three will work. For example, $t = -\pi/2$, $t = \pi/2$, and $t = 3\pi/2$ are all instances.