2.1 + 2.2 Quiz

1. A rock is launched vertically upward from the ground with a speed of 49 m/s. From physics we know that the position function for the rock is given by $s(t) = -9.8t^2 + 49t$. Using this position function -

   a. Fill in the following table

Interval	[1.5, 1.51]	[1.5, 1.501]	[1.5, 1.5001]
Average velocity			

   b. Estimate what the instantaneous rate of change at $t = 1.5$ seconds.

2. Either give a function or sketch a graph of a function that satisfies the following: (a, L can be any number you want)

   a. $\lim_{x \to a} f(x) = L = f(a)$.

   b. $\lim_{x \to a} f(x) = L$ but $f(a) \neq L$.

   c. $\lim_{x \to a} f(x)$ does not exist.