Math 101-181-Sec.19 Quiz #2

Name: **ID:** **SR:**

Q.1: Given that $\lim_{x\to -3}(2x+7)=1$. Use the $\epsilon-\delta$ definition to find the value of δ corresponding to $\epsilon=0.1$

Q.2: Let $f(x)=\begin{cases}\dfrac{\left|\frac{1}{x-3}\right|-\frac{1}{2}}{1-x} & ,0<x<1\\ \dfrac{\left[\!\left[\frac{1}{2}x+1\right]\!\right]}{-4x}, & 1\le x<2\end{cases}$. Is the function continuous at $x=1$? Show your steps.

Q.3: Let $f(x) = \frac{e^x - 4}{2 + 2e^x}$. Find the equation(s) of the vertical and horizontal asymptotes, if exist.