ID #_____ SEC_____ Quiz 1 (*101-T151*) Name_____ SERIAL____

[Important: Draw line at the break point for finding L. H or R. H limit, always] **Q3 is Optional.**

$Q1.$ Let $f(t)=\begin{cases} 2t-1 & t<0, \\ \dfrac{\sqrt{t+1}-1}{t}, & t\geq 0. \end{cases}$ Find $\lim_{t\to 0} f(t)$ if it exists. Show all necessary steps.

$Q2.$ Using the definition of limit, prove that $\lim_{t\to -2}\dfrac{t^2+t-2}{t+2}=-3.$

$Q3$ [*Bonus*]. Evaluate $\lim_{x\to -1^+}\dfrac{|2x-1|}{[\![x+1]\!]}.$

Use other side of paper for the answer

ID #_____ SEC_____ Quiz 1 (101-T151) Name_____ SERIAL____

[Important: Draw line at the break point for finding L. H or R. H limit, always] **Q3 is Optional.**

$Q1.$ Let $f(x)=\begin{cases}\dfrac{x^3-1}{x-1} & x<1,\\ -5+2x, & x\geq 1.\end{cases}$ Find $\lim_{t\to 0} f(t)$ if it exists. Show all necessary steps.

$Q2.$ Using the definition of limit, prove that $\lim_{x\to 0}\sqrt{x+1}=1.$

$Q3$ [*Bonus*]. Evaluate $\lim_{x\to -1/2^-}\dfrac{|2x-1|}{[\![2x+1]\!]}$

Use other side of paper for the answer