ID #__________ SEC______ Quiz 1 (101-T152) Name___________ SERIAL____

$Q1$. Let $f(x)=\begin{cases} \frac{x^2-5x+6}{x-3}, & x<3 \\ \frac{2}{x-1}, & x>3. \end{cases}$ Find $\lim_{x\to 3} f(x)$ if it exists.

$Q2$. Use the graph of $f(x)=\sqrt{1-x}$ to find a number δ such that

$$\left|\sqrt{1-x}-1\right|<0.1 \text{ when } \left|x-0\right|<\delta$$

$Q3$. Find $\lim_{x\to -1^-} \frac{(x+5)^2}{x^2+6x+5}$

Use other side of paper for the answer

ID #__________ SEC______ Quiz 1 (101-T152) Name___________ SERIAL____

$Q1$. Let $f(x)=\begin{cases} \frac{\sqrt{x-1}-1}{x-2}, & x<2 \\ \frac{2}{6-x}, & x>2. \end{cases}$ Find $\lim\limits_{x\to 2} f(x)$ if it exists.

$Q2$. Use the graph of $f(x)=\sqrt{x-1}$ to find a number δ such that

$$\left|\sqrt{x-1}-2\right|<0.1 \text{ when } |x-5|<\delta$$

$Q3$. Find $\lim\limits_{x\to 2^-} \dfrac{x-1}{x^2-3x+2}$

Use other side of paper for the answer

ID #__________ SEC______ Quiz 1 (101-T152) Name___________ SERIAL____

$Q1$. Let $f(x)=\begin{cases} \frac{|x|}{x}, & x<0 \\ \frac{2}{x-2}, & x>0. \end{cases}$ Find $\lim_{x\to 0} f(x)$ if it exists.

$Q2$. Prove the statement: $\lim_{x\to 2}\frac{x^2-5x+6}{x-2}=-1$ using ε-δ definition of limit.

$Q3$. Find $\lim_{x\to -1^-}\dfrac{x+5}{x^2+6x+5}$

Use other side of paper for the answer

ID #__________ SEC______ Quiz 1 (101-T152) Name___________ SERIAL____

$Q1$. Let $f(x) = \begin{cases} [\![x]\!]+1, & x<1 \\ \frac{x+1}{2}, & x>1. \end{cases}$ Find $\lim_{x\to 1} f(x)$ if it exists.

$Q2$. Prove the statement "$\lim_{x\to 1}(5x-3) = 2$" using ε-δ deinition of limit.

$Q3$. Find $\lim_{x\to 2^+} \dfrac{(x-1)^2}{x^2-3x+2}$

Use other side of paper for the answer