

Dhapa Chukwueke 17/11/2021
 Eng 281 Computer Engineering

2) The model of a System has been developed by an engineer to be as given in Equation (2)

$$f(x) = 5x - 21$$

$f(x)$	$x-5$	$x=6$	$x+5$	$f(x)$
8.50	5.90		6.10	9.50
8.55	5.91		6.09	9.45
8.60	5.92		6.08	9.40
8.63	5.93		6.07	9.35
8.70	5.94		6.06	9.30
8.75	5.95		6.05	9.25
8.80	5.96		6.04	9.20
8.85	5.97		6.03	9.15
8.90	5.98		6.02	9.10
8.95	5.99		6.01	9.05
9.00	6.00		6.00	9.00

Since the limits are defined both on the L.H.S and R.H.S can be said the limit is real and thus exists

3) Find the limits of the model question given below:

$$\lim_{x \rightarrow 3^+} \frac{3-x}{|3-x|}$$

4) Evaluate the limit of the model given as $\lim_{x \rightarrow 3} \frac{x-3}{|x-3|}$

$$\lim_{x \rightarrow 3} \frac{x-3}{|x-3|}$$

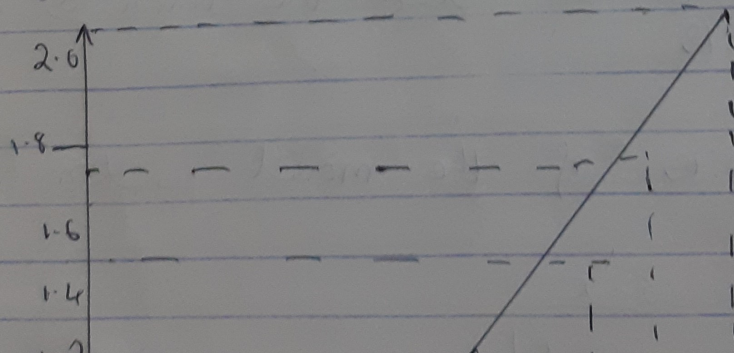
$$\lim_{x \rightarrow 3} \frac{x-3}{|x-3|} = \frac{0}{0}$$

$$\lim_{x \rightarrow 3} \frac{3-3}{|3-3|} = \frac{0}{0}$$

the limit does not exist

x	f(x) = $\sqrt{x-4}$
4	0
5	1.0
6	1.4
7	1.7
8	2.0

The graph shows that $f(x) = \sqrt{x-4}$ of interval $(4, 8)$ is continuous because there was no point where the function was undefined and the graph is a straight line graph.



1) Given a function to be a in equation (1)
 $f(x)$, π find $\lim_{x \rightarrow 3} f(x)$

$$\lim_{x \rightarrow 3} \pi$$

$$x \rightarrow 3$$

$$\lim = \pi$$

$$x \rightarrow 3$$