

ESSANG ROSEMARY

17/ENG 04/023

Electrical/Electronics  
Engineering

ENG 281

1)  $f(x) = \pi$

Find  $\lim_{x \rightarrow 3} (\pi) = \pi$

because  $\pi$  is a constant

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

$\delta = 0.1, 0.01$

$x \rightarrow 6 \text{ is } 9$

$f(x) = 5x - 21$	$x - \delta$	$x \rightarrow 6$	$x + \delta$	$f(x) = 5x - 21$
8.50	5.9		6.1	9.5
8.55	5.91		6.09	9.45
8.60	5.92		6.08	9.4
8.65	5.93		6.07	9.35
8.70	5.94		6.06	9.3
8.75	5.95		6.05	9.25
8.80	5.96		6.04	9.2
8.85	5.97		6.03	9.15
8.90	5.98		6.02	9.1
8.95	5.99		6.01	9.05
9.0	6.0		6.0	9.0

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

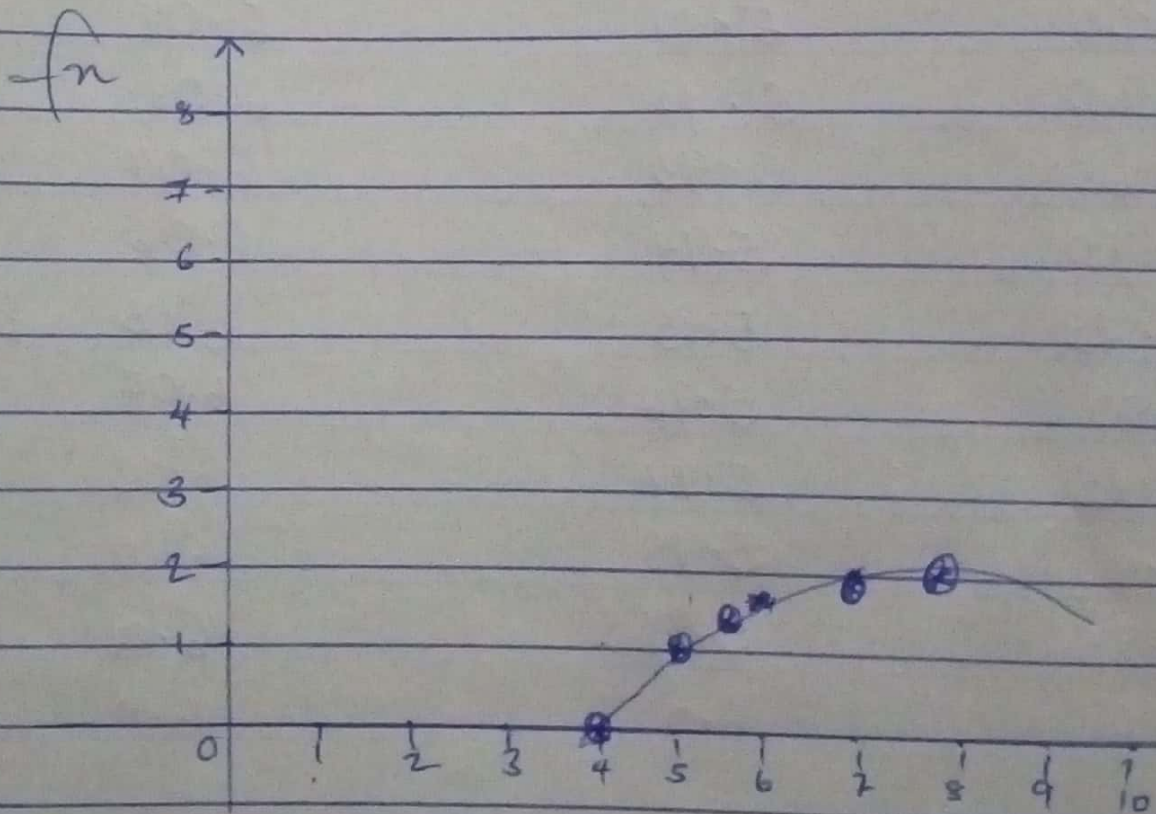
$= \lim_{x \rightarrow 3^+} \frac{3 - (a + \delta)}{|3 - (a + \delta)|}$

$= \lim_{x \rightarrow 3^+} \frac{3 - 3 - \delta}{|3 - 3 - \delta|} = \frac{-\delta}{|-\delta|} = 1$

$$4) \lim_{x \rightarrow 3} \left( \frac{x-3}{|x-3|} \right) = \lim_{x \rightarrow 3} \left( \frac{a-3}{|a-3|} \right) = \frac{3-3}{|3-3|} = \frac{0}{0} \text{ undefined}$$

$$5) f(x) = \sqrt{x-4} \quad (4, 8)$$

$x$	$f(x) = \sqrt{x-4}$
4	0
5	1
6	1.41
7	1.73
8	2



Since the graph is continuous the function is continuous