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1. $f(x) = \pi$

2. $\lim_{x \rightarrow 3} f(x) = \lim_{x \rightarrow 3} \pi$

2. $f(x) = 5x - 21$ $\delta = 0.1$
 step = 0.01

Lim	$a - \delta$	$a + \delta$	Lim
8.50	5.90	6.10	9.50
8.55	5.91	6.09	9.45
8.60	5.92	6.08	9.40
8.65	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 right hand limit & left hand limit is equal to a therefore

$$\lim_{x \rightarrow 3} (5x - 21) = 9$$

3. Find the Limit of the model given as

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

Solution

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

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

Solution

$$\lim_{x \rightarrow 3} \frac{3-3}{3-3} = \frac{0}{0} \text{ undefined, The limit does not exist}$$

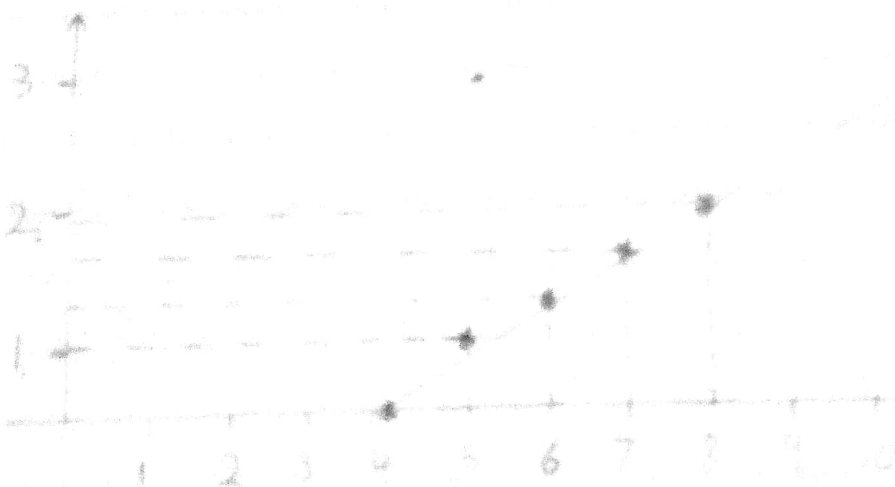
5. Show that the function given in the equation below

is continuous on the interval $[4, 8]$

$$f(x) = \sqrt{x-4}$$

Solution

x	$f(x) = \sqrt{x-4}$
4	0
5	1
6	1.4
7	1.7
8	2.0



The graph above shows that the function $f(x) = \sqrt{x-4}$ at interval $[4, 8]$ is continuous because there was no point where the function was undefined.