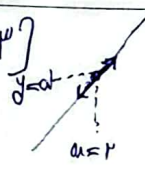


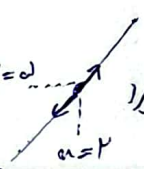
الف) $\lim_{x \rightarrow 2^+} f(x-3) \Rightarrow \alpha=2 \quad y=0$

ب) $\lim_{x \rightarrow 2^-} f(x-3) \Rightarrow \alpha=2 \quad y=0$

الف) $\lim_{x \rightarrow 2^+} f(x)-3 \Rightarrow f(2^+)-3 \Rightarrow f(2)-3=0$

ب) $\lim_{x \rightarrow 2^-} f(x)-3 \Rightarrow f(2^-)-3 \Rightarrow f-3=0$

الف) $\lim_{x \rightarrow 2^+} [f(x-3)] \Rightarrow y=0$ بالا از آنه قراره برد 

ب) $\lim_{x \rightarrow 2^-} [f(x-3)] \Rightarrow y=0$ پایین از آنه قراره برد 

الف) $\lim_{x \rightarrow 2^+} [f(x-3)] \Rightarrow [0^+] = 0$

ب) $\lim_{x \rightarrow 2^-} [f(x-3)] \Rightarrow [0^-] = 0$

الف) $\lim_{x \rightarrow 3} \frac{f(x-3)}{x-3} \begin{cases} \rightarrow 3^+ \Rightarrow \frac{0}{0^+} \Rightarrow +\infty \\ \rightarrow 3^- \Rightarrow \frac{0}{0^-} \Rightarrow -\infty \end{cases}$ حد ندارد

ب) $\lim_{x \rightarrow 3} \frac{f(x-3)}{(x-3)^2} \begin{cases} \rightarrow 3^+ \Rightarrow \frac{0}{0^+} \Rightarrow +\infty \\ \rightarrow 3^- \Rightarrow \frac{0}{0^+} \Rightarrow +\infty \end{cases}$ حد ندارد

<p>الف) $\lim_{x \rightarrow 3} \frac{2x-3}{x-3}$</p>	$\Rightarrow \begin{cases} x^+ \Rightarrow \frac{9}{10+} \Rightarrow +\infty \\ x^- \Rightarrow \frac{9}{10-} \Rightarrow \text{تن} \end{cases}$	
<p>ب) $\lim_{x \rightarrow 3} \frac{15x-3}{\sqrt{x^2-8x+3}}$</p>	$\Rightarrow x^2 - 8x + 3 \Rightarrow (x-3)(x-1) \Rightarrow \frac{9}{1+3-6+}$	$\Rightarrow \begin{cases} x^+ \Rightarrow \frac{9}{10+} \Rightarrow +\infty \\ x^- \Rightarrow \frac{9}{10-} \Rightarrow \text{تن} \end{cases}$
<p>الف) $\lim_{x \rightarrow 3} \frac{2x-3}{x^2-4x+1}$</p>	$\Rightarrow \frac{2x-3}{(x-2)(x-1)} \Rightarrow \frac{1}{1+3-6+}$	$\Rightarrow \begin{cases} x^+ \Rightarrow \frac{9}{10+} \Rightarrow \text{تن} \\ x^- \Rightarrow \frac{9}{10-} \Rightarrow +\infty \end{cases}$
<p>ب) $\lim_{x \rightarrow 3} \frac{15x-3}{x-3}$</p>	$\Rightarrow \begin{cases} x^+ \Rightarrow \frac{9}{0+} \Rightarrow \frac{9}{0} = \text{تن} \\ x^- \Rightarrow \frac{9}{0-} \Rightarrow \frac{9}{-1} = -9 \end{cases}$	<p>7</p>
<p>الف) $\lim_{x \rightarrow 3} [2x] + [-2x]$</p>	$\Rightarrow \begin{matrix} 2x = \dots \\ -2x = \dots \end{matrix}$	$\Rightarrow \begin{cases} x^+ \Rightarrow 9 + (-9) = 0 \\ x^- \Rightarrow 9 + (-9) = 0 \end{cases}$
<p>ب) $\lim_{x \rightarrow 4} [-2x] + [2x]$</p>	$\Rightarrow \begin{matrix} -2x = \dots \\ 2x = \dots \end{matrix}$	$\Rightarrow \begin{cases} -4^+ \Rightarrow 2^4 - 1^4 = 15 \\ -4^- \Rightarrow 2^4 - 1^4 = 15 \end{cases}$
<p>الف) $\lim_{x \rightarrow 2} [x^2 - 8]$</p>		$\Rightarrow \begin{cases} x^+ \Rightarrow -5 \\ x^- \Rightarrow -5 \end{cases}$
<p>ب) $\lim_{x \rightarrow 3} [9x - x^2]$</p>		$\Rightarrow \begin{cases} x^+ \Rightarrow 1 \\ x^- \Rightarrow 1 \end{cases}$
<p>الف) $\lim_{x \rightarrow 2} \frac{ x-2 }{x^2-2x+2}$</p>	$\Rightarrow \begin{cases} x^+ \Rightarrow \frac{x-2}{x^2-2x+2} \Rightarrow \frac{x-2}{(x-2)(x-1)} \Rightarrow \frac{1}{x-1} \Rightarrow x=2 \Rightarrow y=1 \\ x^- \Rightarrow \frac{-(x-2)}{x^2-2x+2} \Rightarrow \frac{-(x-2)}{(x-2)(x-1)} \Rightarrow -\frac{1}{x-1} \Rightarrow x=2 \Rightarrow y=-1 \end{cases}$	<p>9</p>
<p>ب) $\lim_{x \rightarrow 1} \frac{x-(x)}{x^2-1}$</p>	$\Rightarrow \begin{cases} x^+ \Rightarrow \frac{x-1}{x^2-1} \Rightarrow \frac{x-1}{(x-1)(x+1)} \Rightarrow \frac{1}{x+1} \Rightarrow x=1 \Rightarrow y=\frac{1}{2} \\ x^- \Rightarrow \frac{x}{x^2-1} \Rightarrow x(x \neq 1) \Rightarrow x^2-1 > 0 \Rightarrow x=1 \Rightarrow y=\frac{1}{0+} = +\infty \end{cases}$	<p>10</p>