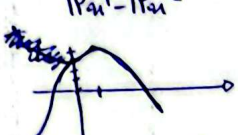
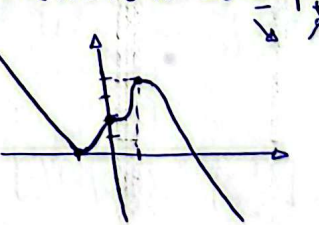


$\lim_{x \rightarrow 2^-} \frac{x^2 + 5}{x + 1}$	$\lim_{x \rightarrow 2^+} \frac{x^2 + 5}{x + 1} = \frac{9}{3} = 3$	(الف)
$\lim_{x \rightarrow 2} \frac{x^2 + 7}{[x^2]} = \frac{9^+}{9^-} = \infty$	$\lim_{x \rightarrow 2} \frac{x^2 + 5}{x + 1} = \frac{9}{3} = 3$	(ج) $\frac{1}{3}$
$\lim_{x \rightarrow 3^-} [x^2 - 2] = [12^- - 2] = 9$	$\lim_{x \rightarrow 3^-} [x^2] \times 2 - 2 = 11 - 2 = 9$	(الف)
$\lim_{x \rightarrow 1^+} \frac{1}{x^2 - 1} \rightarrow 10$	$\lim_{x \rightarrow 1^+} \frac{1}{x^2 - 1} \rightarrow 10$	(ج) $\frac{1}{2}$
$\lim_{x \rightarrow 3^-} \left[\frac{x^2 + 1}{x} \right] = \left[\frac{10^-}{3} \right] = [3^-] = 2$	$\lim_{x \rightarrow 3^-} \frac{x^2 + 1}{x} = \frac{10}{3}$	(الف)
$\lim_{x \rightarrow 3^-} \frac{x^2 + 1}{x} = \frac{10}{3}$	$\lim_{x \rightarrow 3^-} \frac{x^2 + 1}{x} = \frac{10}{3}$	(ب) $\frac{10}{3}$
$\lim_{x \rightarrow 3} \frac{x - 2}{x^2 - 9x + 9} \rightarrow \frac{1}{3 + 1 + 1}$	$\lim_{x \rightarrow 1} \frac{x - 5}{x^2 - 9x + 8} \rightarrow \frac{1}{+1 - 1 + 1}$	(الف)
$\lim_{x \rightarrow 0^+} \frac{-1}{x^2} = -\infty$	$\lim_{x \rightarrow 0^+} \frac{-2}{x^2} = -\infty$	(ج) $\frac{1}{2}$
$x < -\frac{1}{14} \Rightarrow x^2 > \frac{1}{14} \Rightarrow \frac{1}{x^2} < 14$	$\lim_{x \rightarrow 0^+} [x^2] - [5x]$	(الف)
$\lim_{x \rightarrow 0^+} \left[-\frac{1}{x^2} \right] = \lim_{x \rightarrow 0^+} [-14^+] = -14$	$\lim_{x \rightarrow 0^+} [x^2] - [5x] = 1 - 0 = 1$	(ج) $\frac{1}{2}$

(ب) شکل و مستقیم رو به بالا و پایین می‌ماند $\lim_{x \rightarrow 0^+} [A] = \lim_{x \rightarrow 0^+} [x^+] = 0^+ = 0^-$ $\lim_{x \rightarrow 0^-} [x^-] = 0^- = 0^+$ حد ندارد	(الف) مشتق $\lim_{x \rightarrow 1} [x^2 - 2x + 1] = 0$  $\lim_{x \rightarrow 1} [x^2] = 1$
(ب) $\lim_{x \rightarrow \pi} \frac{ \sin x }{\sin x} = \begin{cases} \frac{-\sin x}{\sin x} = -1 \\ \frac{+\sin x}{\sin x} = 1 \end{cases}$ حد ندارد	(الف) $\lim_{x \rightarrow 1} \frac{x^2 - 1}{x^2 - 2} = \frac{0}{-1} = 0$ $\lim_{x \rightarrow 1} \frac{1 - x^2}{x^2 - 2} = \frac{0}{-1} = 0$ حد ندارد
(ب) $\lim_{x \rightarrow \infty} \sqrt{x - 2\sqrt{x}} = \sqrt{x} - \sqrt{x} = 0$ حد ندارد	(الف) $\lim_{x \rightarrow \frac{\pi}{2}} \sqrt{\cos x} = \sqrt{0} = 0$ حد ندارد
(ب) $\lim_{x \rightarrow 1} \frac{x^2 - [x]}{x - [x]} = \frac{0}{0}$ $\lim_{x \rightarrow 1} \frac{x^2 - 1}{x - 1} = 1$ حد ندارد	(الف) $\lim_{x \rightarrow 0^+} \frac{(-1)^{[x]}}{x^2 - x^2} = \frac{1}{0}$ $\lim_{x \rightarrow 0^+} \frac{1}{x^2(x-1)} = -\infty$
(ب) $y' = 2x^2 - 2x + 0 = 2x(x-1)$ 	(الف) $y' = 18x^2 - 18x^2 = 0$ 

خسته نباشی قربان...