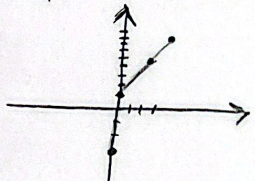
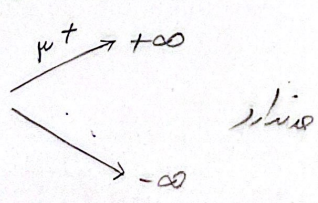
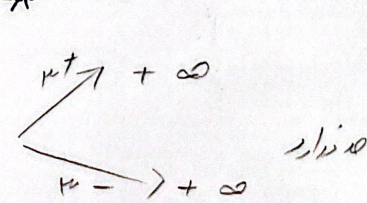


الف) $\lim_{x \rightarrow 2^+} f(x) - 3$ $\lim_{x \rightarrow 2^+} f(x) - 3 = f(2) - 3 = \infty$ 	ب) $\lim_{x \rightarrow 2^-} f(x) - 3$ $\lim_{x \rightarrow 2^-} f(x) - 3 = f(2) - 3 = \infty$	۱
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الف) $\lim_{x \rightarrow 2^+} f[x] - 3$ $[2^+] = 2$ $f(2) - 3 = \infty$	ب) $\lim_{x \rightarrow 2^-} f[x] - 3$ $[2^-] = 1$ $f(1) - 3 = 1$	۲
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الف) $\lim_{x \rightarrow 2^+} f[x - 3]$ $[1^+ - 3] = [\infty^+]$ $\lim_{x \rightarrow 2^+} [f(x) - 3] = \infty$	ب) $\lim_{x \rightarrow 2^-} f[x - 3]$ $[1^- - 3] = [\infty^-]$ $\lim_{x \rightarrow 2^-} [f(x) - 3] = f$	۳
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الف) $\lim_{x \rightarrow 2^+} [f(x) - 3]$ $[f(2) - 3]_{[\infty^+]} = \infty$	ب) $\lim_{x \rightarrow 2^-} [f(x) - 3]$ $[f(2) - 3] = \infty$	۴
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الف) $\lim_{x \rightarrow 2} \frac{f(x) - 3}{x - 2}$ 	ب) $\lim_{x \rightarrow 2} \frac{f(x) - 3}{(x - 2)^2}$ 	۵
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الف) $\lim_{x \rightarrow 2} \frac{4x-4}{\sqrt{x}-2}$

$x \rightarrow 2^+$ $\frac{4}{\sqrt{0^+}} \rightarrow +\infty$

$x \rightarrow 2^-$ $\frac{4}{\sqrt{0^-}} \rightarrow -\infty$

ليس

ب) $\lim_{x \rightarrow 2} \frac{4x-4}{\sqrt{x^2-4x+4}}$ $\frac{1^+}{+1^+}$

$x \rightarrow 2^+$ ∞

$x \rightarrow 2^-$ ∞ ليس

الف) $\lim_{x \rightarrow 2} \frac{4x-4}{x^2-4x+4}$ $\frac{4^+}{+1^+}$

$x \rightarrow 2^+$ $\frac{4}{0^+} \rightarrow +\infty$

$x \rightarrow 2^-$ $\frac{4}{0^+} \rightarrow -\infty$

ليس

ب) $\lim_{x \rightarrow 2} \frac{4x-4}{[x-2]}$

$x \rightarrow 2^+$ ∞

$x \rightarrow 2^-$ $-4x+4 = -4(2)+4 = -8+4 = -4$

الف) $\lim_{n \rightarrow 2} [2n] + [-2n]$

$n \rightarrow 2^+$ $4 + (-4) = 0$

$n \rightarrow 2^-$ $1 + (-2) = -1$

ب) $\lim_{x \rightarrow 2} [-4x] + [2x]$

$x \rightarrow 2^+$ $-8 + 4 = -4$

$x \rightarrow 2^-$ $-8 + 4 = -4$

الف) $\lim_{n \rightarrow 2} [n^2 - 2n]$

$n \rightarrow 2^+$ $[4^+ - 4^+] = 0$

$n \rightarrow 2^-$ $[4^- - 4^-] = 0$

ب) $\lim_{n \rightarrow 2} [2n - n^2]$

$n \rightarrow 2^+$ $[4^+ - 4^+] = 0$

$n \rightarrow 2^-$ $[4^- - 4^-] = 0$

الف) $\lim_{n \rightarrow 2} \frac{(n-2)}{n^2-4n+4}$ $\frac{0}{(n-2)(n-2)}$

$n \rightarrow 2^+$ $\frac{(n-2)}{(n-2)(n-2)} = \frac{1}{n-2} = \frac{1}{0^+} = +\infty$

$n \rightarrow 2^-$ $\frac{-(n-2)}{(n-2)(n-2)} = \frac{-1}{n-2} = \frac{-1}{0^-} = +\infty$

ب) $\lim_{n \rightarrow 1} \frac{n-[n]}{n^2-1}$

$n \rightarrow 1^+$ $\frac{1-1}{(n+1)(n-1)} = \frac{0}{0}$ $\frac{1^+}{(n+1)(n-1)} = \frac{1}{0^+} = +\infty$

$n \rightarrow 1^-$ $\frac{1-0}{n^2-1} = \frac{1}{n^2-1} = \frac{1}{0^-} = -\infty$