

<p>الف) $\lim_{n \rightarrow 2^+} f_n - 3 \rightarrow$ $f(2) - 3 = 5 \checkmark$</p>	<p>ب) $\lim_{n \rightarrow 2^-} f_n - 3 \rightarrow$ $f(2) - 3 = 5 \checkmark$</p> <p style="text-align: right;">(۲)</p>
<p>الف) $\lim_{n \rightarrow 2^+} f[n] - 3$ $f[2] - 3 = 5 \checkmark$</p>	<p>ب) $\lim_{n \rightarrow 2^-} f[n] - 3$ $f[2^-] - 3 = (f(x)) - 3 = 5 \checkmark$</p> <p style="text-align: right;">(۲)</p>
<p>الف) $\lim_{n \rightarrow 2^+} [f_n - 3]$ $[f(2^+) - 3] = [5^+] = 5 \checkmark$</p>	<p>ب) $\lim_{n \rightarrow 2^-} [f_n - 3]$ $[f(2^-) - 3] = [5^-] = 5 \checkmark$</p> <p style="text-align: right;">(۲)</p>
<p>الف) $\left[\lim_{n \rightarrow 2^+} f_n - 3 \right] = 5$ $f(2) - 3 = 5 \checkmark$</p>	<p>ب) $\left[\lim_{n \rightarrow 2^-} f_n - 3 \right] = 5$ $f(2) - 3 = 5 \checkmark$</p> <p style="text-align: right;">(۲)</p>
<p>الف) $\lim_{n \rightarrow 2} \frac{f_n - 3}{n - 2}$ سرنهاده $\left. \begin{array}{l} n^+ \\ n^- \end{array} \right\} \frac{9}{0^+} = +\infty$ $\frac{9}{0^-} = -\infty \checkmark$</p>	<p>ب) $\lim_{n \rightarrow 2} \frac{f_n - 3}{(n - 2)^2}$ سرنهاده $\left. \begin{array}{l} n^+ \\ n^- \end{array} \right\} \frac{9}{0^+} = +\infty$ $\frac{9}{0^+} = +\infty \checkmark$</p> <p style="text-align: right;">(۲)</p>

$$\lim_{n \rightarrow 3} \frac{f(n) - 3}{\sqrt{n} - 3}$$

$$\begin{cases} n^+ & \frac{9}{\sqrt{0^+}} = \frac{9}{0^+} = +\infty \\ n^- & \frac{9}{\sqrt{0^-}} = -\infty \end{cases}$$

$$\lim_{n \rightarrow 3} \frac{f(n) - 3}{\sqrt{n^2 - 4n + 3}}$$

$$\begin{cases} n^+ & \frac{9}{\sqrt{0^+}} = +\infty \\ n^- & \frac{9}{\sqrt{0^-}} = -\infty \end{cases}$$

(2)

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$$\lim_{n \rightarrow 3} \frac{f(n) - 3}{n^2 - \sqrt{n} + 12} \rightarrow \frac{n}{+|-|}$$

$$\begin{cases} n^+ & \frac{9}{0^-} = -\infty \\ n^- & \frac{9}{0^+} = +\infty \end{cases}$$

$$\lim_{n \rightarrow 3} \frac{f(n) - 3}{[n - 3]}$$

$$\begin{cases} n^+ & \frac{9}{[0^+]} = +\infty \\ n^- & \frac{9}{[0^-]} = -9 \end{cases}$$

(2)

(7)

$$\lim_{n \rightarrow 3} [f(n)] + [-f(n)]$$

$$\begin{cases} n^+ & [9^+] + [-4^-] = 9 - 4 = 5 \\ n^- & [9^-] + [-4^+] = 9 - 4 = 5 \end{cases}$$

$$\lim_{n \rightarrow 3} [-f(n)] + [f(n)]$$

$$\begin{cases} (-)^+ & [24^-] + [-12^+] = 24 - 12 = 12 \\ (-)^- & [24^+] + [-12^-] = 24 - 12 = 12 \end{cases}$$

(2)

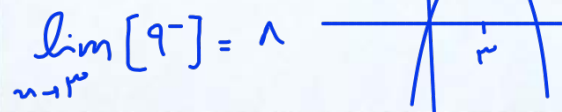
(1)

$$\lim_{n \rightarrow 3} [n^2 - 4n]$$

$$\begin{cases} n^+ & 9 - 12 = -3 \\ n^- & 9 - 12 = -3 \end{cases}$$

$$\lim_{n \rightarrow 3} [2n - n^2]$$

$$\begin{cases} n^+ & 18 - 9 = 9 \\ n^- & 18 - 9 = 9 \end{cases}$$



(1)

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$$\lim_{n \rightarrow 2} \frac{|n-2|}{n^2 - 2n + 2}$$

$$\begin{cases} n^+ & \frac{0}{(2-2)(2-1)} = \frac{1}{2-1} = 1 \\ n^- & \frac{-0}{(2-2)(2-1)} = \frac{-1}{1} = -1 \end{cases}$$

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

$$\begin{cases} n^+ & \frac{1-1}{1^2-1} = \frac{1}{0^+} = +\infty \\ n^- & \frac{1-1}{(1-1)(1+1)} = \frac{1}{(0^-)(2)} = -\infty \end{cases}$$

(2)

(1)