

الف) $\lim_{x \rightarrow 2^+} f(x-2)$ $f(2) - 2 = 0$ ب) $\lim_{x \rightarrow 2^-} f(x-2)$ 0 (1)

الف) $\lim_{x \rightarrow 2^+} f(x) - 2$ $f(2^+) - 2$ $f(2) - 2 = 0$ ب) $\lim_{x \rightarrow 2^-} f(x) - 2$ $f(2^-) - 2$ $f(1) - 2 = -1$ (2)

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

الف) $\lim_{x \rightarrow 2^+} [f(x-2)]$ 0 $[f(2^+) - 2] = [0^+]$ ب) $\lim_{x \rightarrow 2^-} [f(x-2)]$ 0 $[f(2^-) - 2] = [0^-]$ (4)

الف) $\lim_{x \rightarrow 2^+} \frac{f(x-2)}{x-2}$ حد ثابت $\frac{0}{0^+} = +\infty$ ب) $\lim_{x \rightarrow 2^-} \frac{f(x-2)}{(x-2)^2}$ حد ثابت $\frac{0}{0^+} = +\infty$ $\frac{0}{0^-} = +\infty$ (5)

الف) $\lim_{x \rightarrow 2^+} \frac{f(x-2)}{\sqrt{x-2}}$ $\frac{0}{0^+} = +\infty$ ب) $\lim_{x \rightarrow 2^+} \frac{f(x-2)}{\sqrt{(x-2)(x-1)}}$ $\frac{0}{0^+} = +\infty$ (6)

الف) $\lim_{x \rightarrow 2^+} \frac{f(x-2)}{(x-2)(x-1)}$ $\frac{0}{0^+} = +\infty$ ب) $\lim_{x \rightarrow 2^+} \frac{f(x-2)}{[x-2]}$ $\frac{0}{0^+} = +\infty$ (7)

9) $\lim_{x \rightarrow 2} [3x] + [-2x]$ $\left\{ \begin{array}{l} x^+ \rightarrow [9^+] + [-6^-] = 9 - 6 = 3 \\ x^- \rightarrow [9^-] + [-6^+] = 9 - 6 = 3 \end{array} \right.$ حد دارد

5) $\lim_{x \rightarrow -4} [-5x] + [2x]$ $\left\{ \begin{array}{l} x^+ \rightarrow [-20^+] + [-8^+] = -20 - 8 = -28 \\ x^- \rightarrow [-20^-] + [-8^-] = -20 - 8 = -28 \end{array} \right.$ حد دارد

1) $\lim_{x \rightarrow 2} [x^2 - 5x]$ $\left\{ \begin{array}{l} x^+ \rightarrow [(4-10)^+] = [-6^+] = -6 \\ x^- \rightarrow [(4-10)^-] = [-6^-] = -6 \end{array} \right.$ حد دارد

10) $\lim_{x \rightarrow 2} [9x - x^2]$ $\left\{ \begin{array}{l} x^+ \rightarrow [(18-9)^+] = [9^+] = 9 \\ x^- \rightarrow [(18-9)^-] = [9^-] = 9 \end{array} \right.$ حد دارد

15) $\lim_{x \rightarrow 2} \frac{|x-2|}{2x^2 - 5x + 2}$ $\left\{ \begin{array}{l} x^+ \rightarrow \frac{0^+}{(4-10+2)} = \frac{0^+}{-4} = 0 \\ x^- \rightarrow \frac{0^-}{(4-10+2)} = \frac{0^-}{-4} = 0 \end{array} \right.$ حد دارد

1) $\lim_{x \rightarrow 1} \frac{x - [x]}{x^2 - 1}$ $\left\{ \begin{array}{l} x^+ \rightarrow \frac{1-1}{1-1} = \frac{0}{0} = \frac{1}{2} \\ x^- \rightarrow \frac{1-1}{1-1} = \frac{0}{0} = -\infty \end{array} \right.$ حد ندارد