

سوال (۱) الف) $\lim_{x \rightarrow 2^+} \epsilon_{x-2} = \epsilon(2) - 2 = 0$ ب) $\lim_{x \rightarrow 2^-} \epsilon_{x-2} = \epsilon(2) - 2 = 0$

سوال (۲) الف) $\lim_{x \rightarrow 2^+} \epsilon[x_{x^+}] - 2 = \epsilon[2^+] - 2 = 0$ ب) $\lim_{x \rightarrow 2^-} \epsilon[x_{x^-}] - 2 = \epsilon[2^-] - 2 = 0$

سوال (۳) الف) $\lim_{x \rightarrow 2^+} [\epsilon_{x-2}] = [\epsilon(2^+) - 2] = [0] = 0$ ب) $\lim_{x \rightarrow 2^-} [\epsilon_{x-2}] = [\epsilon(2^-) - 2] = [0] = 0$

سوال (۴) الف) $[\lim_{x \rightarrow 2^+} \epsilon_{x-2}] = [\epsilon(2) - 2] = [0] = 0$ ب) $[\lim_{x \rightarrow 2^-} \epsilon_{x-2}] = [\epsilon(2) - 2] = [0] = 0$

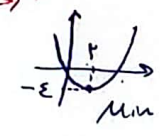
سوال (۵) الف) $\lim_{x \rightarrow 3} \frac{\epsilon_{x-3}}{x-3} \xrightarrow{x^+} \frac{\epsilon(3)-3}{0^+} = \frac{0}{0^+} = +\infty$ ب) $\lim_{x \rightarrow 3} \frac{\epsilon_{x-3}}{(x-3)^2} \xrightarrow{x^+} \frac{\epsilon(3)-3}{0^+} = \frac{0}{0^+} = +\infty$
 $\xrightarrow{x^-} \frac{\epsilon(3)-3}{0^-} = \frac{0}{0^-} = -\infty$ $\xrightarrow{x^-} \frac{\epsilon(3)-3}{0^-} = \frac{0}{0^-} = +\infty$

سوال (۶) الف) $\lim_{x \rightarrow 3} \frac{\epsilon_{x-3}}{\sqrt{x-3}} \xrightarrow{x^+} \frac{\epsilon(3)-3}{0^+} = \frac{0}{0^+} = +\infty$ ب) $\lim_{x \rightarrow 3} \frac{\epsilon_{x-3}}{\sqrt{x^2-\epsilon_{x+3}}} \xrightarrow{x^+} \frac{\epsilon(3)-3}{0^+} = \frac{0}{0^+} = +\infty$
 $\xrightarrow{x^-} \frac{\epsilon(3)-3}{0^-} = \frac{0}{0^-} = -\infty$ $\xrightarrow{x^-} \frac{\epsilon(3)-3}{0^-} = \frac{0}{0^-} = +\infty$

سوال (۷) الف) $\lim_{x \rightarrow 3} \frac{\epsilon_{x-3}}{x^2-\sqrt{x+1}} \xrightarrow{x^+} \frac{\epsilon(3)-3}{0^+} = \frac{0}{0^+} = +\infty$ ب) $\lim_{x \rightarrow 3} \frac{\epsilon_{x-3}}{(x-3)^2} \xrightarrow{x^+} \frac{\epsilon(3)-3}{0^+} = \frac{0}{0^+} = +\infty$
 $\xrightarrow{x^-} \frac{\epsilon(3)-3}{0^-} = \frac{0}{0^-} = -\infty$ $\xrightarrow{x^-} \frac{\epsilon(3)-3}{0^-} = \frac{0}{0^-} = -9$

سوال (۸) الف) $\lim_{x \rightarrow 3} [x_{x^+}] + [-x_{x^-}] \xrightarrow{x^+} [9^+] + [-6^-] = 9 - 6 = 3$ ب) $\lim_{x \rightarrow -4} [-\epsilon_{x+4}] + [x_{x^+}] \xrightarrow{x^+} [-4^+] + [4^+] = -4 + 4 = 0$
 $\xrightarrow{x^-} [9^-] + [-6^+] = 9 - 6 = 3$ $\xrightarrow{x^-} [-4^-] + [4^-] = -4 + 4 = 0$

سوال (۹) الف) $\lim_{x \rightarrow 2} [x^2 - \epsilon_{x-2}] = [4 - \epsilon(2)] = [4 - 0] = 4$ ب) $\lim_{x \rightarrow 2} [\epsilon_{x-2} - x^2] = [0 - 4] = -4$



سوال (۱۰) الف) $\lim_{x \rightarrow 2} \frac{|x-2|}{x^2-3x+2} \xrightarrow{x^+} \frac{|2-2|}{(2-3)(2-1)} = \frac{0}{-1} = 0$ ب) $\lim_{x \rightarrow 1} \frac{x-[x]}{x^2-1} \xrightarrow{x^+} \frac{1-[1]}{1-1} = \frac{0}{0} = 0$
 $\xrightarrow{x^-} \frac{|2-2|}{(2-3)(2-1)} = \frac{0}{-1} = 0$ $\xrightarrow{x^-} \frac{1-[1]}{1-1} = \frac{0}{0} = 0$