

سوال (۱) (۲) $\lim_{x \rightarrow 2^+} \epsilon x - 3 = \epsilon(2) - 3 = \omega$ ✓ ب) $\lim_{x \rightarrow 2^-} \epsilon x - 3 = \epsilon(2) - 3 = \omega$ ✓

سوال (۲) (۲) الف) $\lim_{x \rightarrow 2^+} \epsilon [x] - 3 = \epsilon[2^+] - 3 = \omega$ ✓ ب) $\lim_{x \rightarrow 2^-} \epsilon [x] - 3 = \epsilon[2^-] - 3 = 1$ ✓

سوال (۳) (۲) الف) $\lim_{x \rightarrow 2^+} [\epsilon x - 3] = [\epsilon(2^+) - 3] = [\omega] = \omega$ ✓ ب) $\lim_{x \rightarrow 2^-} [\epsilon x - 3] = [\epsilon(2^-) - 3] = [\omega] = \omega$ ✓

سوال (۴) (۲) الف) $[\lim_{x \rightarrow 2^+} \epsilon x - 3] = [\epsilon(2) - 3] = [\omega] = \omega$ ✓ ب) $[\lim_{x \rightarrow 2^-} \epsilon x - 3] = [\epsilon(2) - 3] = [\omega] = \omega$ ✓

سوال (۵) (۲) الف) $\lim_{x \rightarrow 3} \frac{\epsilon x - 3}{x - 3}$ $\xrightarrow{x^+} \frac{\epsilon(3) - 3}{0^+} = \frac{9}{0^+} = +\infty$ ✓ ب) $\lim_{x \rightarrow 3} \frac{\epsilon x - 3}{(x-3)^2}$ $\xrightarrow{x^+} \frac{\epsilon(3) - 3}{0^+} = \frac{9}{0^+} = +\infty$ ✓
 $\xrightarrow{x^-} \frac{\epsilon(3) - 3}{0^-} = \frac{9}{0^-} = -\infty$ ✓ $\xrightarrow{x^-} \frac{\epsilon(3) - 3}{0^-} = \frac{9}{0^-} = +\infty$ ✓

سوال (۶) (۲) الف) $\lim_{x \rightarrow 3} \frac{\epsilon x - 3}{\sqrt{x} - 3}$ $\xrightarrow{x^+} \frac{\epsilon(3) - 3}{0^+} = \frac{9}{0^+} = +\infty$ ✓ ب) $\lim_{x \rightarrow 3} \frac{\epsilon x - 3}{\sqrt{x^2 - \epsilon x + 3}}$ $\xrightarrow{x^+} \frac{\epsilon(3) - 3}{0^+} = \frac{9}{0^+} = +\infty$ ✓
 $\xrightarrow{x^-} \frac{\epsilon(3) - 3}{0^-} = \frac{9}{0^-} = -\infty$ ✓ $\xrightarrow{x^-} \frac{\epsilon(3) - 3}{0^-} = \frac{9}{0^-} = +\infty$ ✓

سوال (۷) (۲) الف) $\lim_{x \rightarrow 3} \frac{\epsilon x - 3}{x^2 - \sqrt{x} + 1}$ $\xrightarrow{x^+} \frac{\epsilon(3) - 3}{0^+} = \frac{9}{0^+} = +\infty$ ✓ ب) $\lim_{x \rightarrow 3} \frac{\epsilon x - 3}{(x-3)}$ $\xrightarrow{x^+} \frac{\epsilon(3) - 3}{0^+} = \frac{9}{0^+} = +\infty$ ✓
 $\xrightarrow{x^-} \frac{\epsilon(3) - 3}{0^-} = \frac{9}{0^-} = -\infty$ ✓ $\xrightarrow{x^-} \frac{\epsilon(3) - 3}{0^-} = \frac{9}{0^-} = -9$ ✓

سوال (۸) (۲) الف) $\lim_{x \rightarrow 3} [3x] + [-2x]$ $\xrightarrow{x^+} [9^+] + [-6^-] = 9 - 6 = 3$ ✓ ب) $\lim_{x \rightarrow -4} [-\epsilon x] + [2x]$ $\xrightarrow{x^+} [4^-] + [8^+] = 4 + 8 = 12$ ✓
 $\xrightarrow{x^-} [9^-] + [-6^+] = 9 - 6 = 3$ ✓ $\xrightarrow{x^-} [-2\epsilon] + [2x] = -2 + 8 = 6$ ✓

سوال (۹) (۲) الف) $\lim_{x \rightarrow 2} [x^2 - \epsilon x] = [4 - \epsilon(2)] = [4 - 2] = 2$ ✓ ب) $\lim_{x \rightarrow 2} [\epsilon x - x^2] = [4 - 4] = 0$ ✓

سوال (۱۰) (۲) الف) $\lim_{x \rightarrow 2} \frac{|x-2|}{x^2 - 3x + 2}$ $\xrightarrow{x^+} \frac{(x-2)}{(x-2)(x-1)} = \frac{1}{x-1} = 1$ ✓ ب) $\lim_{x \rightarrow 1} \frac{x - [x]}{x^2 - 1}$ $\xrightarrow{x^+} \frac{x-1}{x^2-1} = \frac{1}{x+1} = \frac{1}{2}$ ✓
 $\xrightarrow{x^-} \frac{-(x-2)}{(x-2)(x-1)} = -\frac{1}{x-1} = -1$ ✓ $\xrightarrow{x^-} \frac{x}{x^2-1} = \frac{1}{0^-} = -\infty$ ✓