

نام و نام خانوادگی آریزنی پاسخنامه تشریحی تکلیف شماره ۱۸... کلاس... دوازدهم A.....

$$\text{الف) } \lim_{x \rightarrow 2^+} \frac{2x+5}{x+1} = \frac{2(2)+5}{2+1} = \frac{9}{3} = 3 \quad \textcircled{3}$$

$$\text{ب) } \lim_{x \rightarrow 2^-} \frac{2x+5}{x+1} = \frac{2(2)+5}{2+1} = \frac{9}{3} = 3 \quad \textcircled{3} \quad \text{و) } \lim_{x \rightarrow 0} \frac{1x+7}{[x^2]} = \frac{7}{0} \quad \infty$$

$$\text{ج) } \lim_{x \rightarrow 2} \frac{2x+5}{x+1} = \frac{2(2)+5}{2+1} = 3 \quad \textcircled{3}$$

$$\text{الف) } \lim_{x \rightarrow 3^-} f[x]-2 = f[3^-]-2 = f(2)-2 = 6 \quad \textcircled{6}$$

$$\text{ب) } \lim_{x \rightarrow 3^-} [f(x)-2] = [f(3^-)-2] \cdot [10^-] = 9 \quad \textcircled{9} \quad \text{و) } \left[\lim_{x \rightarrow 3^+} f(x)+2 \right] \Rightarrow \lim_{x \rightarrow 3^+} f(x)+2 = 14$$

$$\text{ج) } \left[\lim_{x \rightarrow 3^-} f(x)-2 \right] \Rightarrow \lim_{x \rightarrow 3^-} f(x)-2 = \frac{10}{1} \rightarrow \left[\frac{10}{1} \right] = 10 \quad \textcircled{10} \quad \text{و) } [14] = 14$$

عدد فیلس دوازدهم کمتر است

$$\text{الف) } \lim_{x \rightarrow 3^-} \frac{3[x]+1}{2} = \frac{3[3^-]+1}{2} = \frac{3(2)+1}{2} = \frac{7}{2} \quad \textcircled{\frac{7}{2}} \quad \text{و) } \left[\lim_{x \rightarrow 3^-} \frac{3x+1}{2} \right] \Rightarrow \frac{3(3)+1}{2} = 5$$

$$\text{ب) } \lim_{x \rightarrow 3^-} \left[\frac{3x+1}{2} \right] = \left[\frac{3(3^-)+1}{2} \right] \cdot \left[\frac{10^-}{2} \right] \cdot [5] = 4 \quad \textcircled{4} \quad \text{و) } [5] = 5 \quad \textcircled{5}$$

$$\text{ج) } \left[\lim_{x \rightarrow 3^-} \frac{3x+1}{2} \right] \Rightarrow \frac{3(3)+1}{2} = 5 \xrightarrow{\text{محدود}} [5] = 5 \quad \textcircled{5}$$

$$\text{الف) } \lim_{x \rightarrow 1} \frac{x-5}{x^2-4x+5} = \frac{x-5}{(x-5)(x-1)} = \frac{1}{x-1} \quad \left[\begin{array}{l} 1^+ \\ 1^- \end{array} \right] \rightarrow \frac{1}{1^+-1} = \frac{1}{0^+} = +\infty$$

$$\frac{1}{1^--1} = \frac{1}{0^-} = -\infty$$

$$\text{ب) } \lim_{x \rightarrow 2} \frac{x-4}{x^2-4x+9} = \frac{x-4}{(x-2)^2} \xrightarrow{x \rightarrow 2} \frac{2^+-4}{(2^+-2)^2} = \frac{-1}{0^+} = -\infty$$

کسب مثبت تر یعنی از ۳ بدو ۴ نیست چون توان ۲ دارد

$$\text{الف) } \lim_{x \rightarrow -2} [-3x] - [5x] = \left[\begin{array}{l} 3^- \\ -2^+ \end{array} \right] [-3(-2^-)] - [5(-2^-)] = [9^+] - [-10^-] = 9+10 = 19 \quad \textcircled{19}$$

$$\left[\begin{array}{l} 3^- \\ -2^+ \end{array} \right] [-3(-2^+)] - [5(-2^+)] = [9^-] - [-10^+] = 9+10 = 19 \quad \textcircled{19}$$

$$\text{ب) } \lim_{x \rightarrow (-1/2)} \left[\frac{-1}{x^2} \right] = \left[\frac{-1}{(-1/2)^2} \right] \cdot \left[\frac{-1}{1/4} \right] \cdot [-16] = -16 \quad \textcircled{-16}$$

الف) $\lim_{x \rightarrow 1} [f(x)^3 - f(x)^2 + 3]$ * $x \rightarrow 1^+ \Rightarrow x^2 > x^3$ * $x \rightarrow 1^- \Rightarrow x^3 > x^2$ ب) $\lim_{x \rightarrow 1} [f(x)^3 - f(x)^2 + 3]$	$\xrightarrow{x \rightarrow 1^+} [f(1^+)^3 - f(1^+)^2 + 3] = [f^+ - f^+ + 3] = [f^+] = 3$ $\xrightarrow{x \rightarrow 1^-} [f(1^-)^3 - f(1^-)^2 + 3] = [f^- - f^- + 3] = [f^-] = 3$ $\xrightarrow{x \rightarrow 0^+} [1/0^3 - 1/0^2 + 3] = [3 + \infty] = 3$ $\xrightarrow{x \rightarrow 0^-} [1/0^3 - 1/0^2 + 3] = [3 - \infty] = 3$
الف) $\lim_{x \rightarrow 2} \frac{x^3 - 1}{x^2 - 1}$ ب) $\lim_{x \rightarrow \pi} \frac{ \sin x }{\sin x}$	$\xrightarrow{x \rightarrow 2^+} \frac{x^3 - 1}{x^2 - 1} = \frac{(x-1)(x^2+x+1)}{(x-1)(x+1)} = \frac{12}{4} = 3$ $\xrightarrow{x \rightarrow 2^-} \frac{x^3 - 1}{x^2 - 1} = \frac{(x-1)(x^2+x+1)}{(x-1)(x+1)} = \frac{12}{4} = 3$ $\xrightarrow{x \rightarrow \pi^+} \frac{ \sin x }{\sin x} = \frac{-1}{-1} = 1$ $\xrightarrow{x \rightarrow \pi^-} \frac{ \sin x }{\sin x} = \frac{1}{1} = 1$
الف) $\lim_{x \rightarrow \frac{\pi}{2}} \sqrt{\cos x}$ ب) $\lim_{x \rightarrow 0} \sqrt{x - 2\sqrt{x}}$	$\xrightarrow{x \rightarrow \frac{\pi}{2}^+} \sqrt{\cos x} = \sqrt{0^+} = 0$ $\xrightarrow{x \rightarrow \frac{\pi}{2}^-} \sqrt{\cos x} = \sqrt{0^-} = 0$ $\xrightarrow{x \rightarrow 0^+} \sqrt{x - 2\sqrt{x}} = \sqrt{0^+ - 2 \cdot 0^+} = \sqrt{0^+} = 0$ $\xrightarrow{x \rightarrow 0^-} \sqrt{x - 2\sqrt{x}} = \sqrt{0^- - 2 \cdot 0^-} = \sqrt{0^-} = 0$
الف) $\lim_{x \rightarrow +\infty} \frac{(1) \sin x}{x^3 - x^2}$ ب) $\lim_{x \rightarrow \frac{1}{2}} \frac{x^2 - [x^2]}{x - [x]}$	$\xrightarrow{x \rightarrow +\infty} \frac{(1) \sin x}{x^3 - x^2} = \frac{1}{\infty} = 0$ $\xrightarrow{x \rightarrow +\infty} \frac{(1) \sin x}{x^3 - x^2} = \frac{1}{\infty} = 0$ $\xrightarrow{x \rightarrow \frac{1}{2}^+} \frac{x^2 - [x^2]}{x - [x]} = \frac{1/4 - 1/4}{1/2 - 1/2} = \frac{0}{0} = 1$ $\xrightarrow{x \rightarrow \frac{1}{2}^-} \frac{x^2 - [x^2]}{x - [x]} = \frac{1/4 - 1/4}{1/2 - 1/2} = \frac{0}{0} = 1$
الف) $-x^5 + 5x^4 + 2 \rightarrow y' = -15x^4 + 20x^3 \rightarrow y' = 0 \rightarrow -15x^4(4x - 1) = 0 \rightarrow -15x^4(4x - 1)$ ب) $f(x) = x^4 - 4x^3 + 6x^2 - 4x + 1$	$\xrightarrow{y' = 0} -15x^4(4x - 1) = 0 \rightarrow x = 0 \text{ or } x = 1/4$ $\xrightarrow{f(x) = x^4 - 4x^3 + 6x^2 - 4x + 1}$

باسلام خدمت مہم گرامی غذرخواہی من و جانماہر جہ نقی در ارسال تعالیف و نقوش در آیتا پذیرید، تکرار نمی شود (ن) ۱۱ با سئو از شما