نام و نام خانوادگی ......آیسا [illegible]............ پاسخنامه تشریحی تکلیف شماره ..۲.. کلاس ..دوازدهم تجربی A......

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$$\lim_{x\to 2} \frac{\overset{-1}{2x-5}}{\underbrace{x^2+ax+b}_{0^+}} = -\infty \Rightarrow x^2+ax+b=(x-2)^2$$

$$x^2-4x+4=x^2+ax+b \rightsquigarrow a=-4 \ , \ b=4$$

$$\boxed{a+b=0}$$

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$$\lim_{x\to \sqrt[3]{4}} \frac{\overset{\sqrt[3]{4}}{x}}{\underbrace{x^2+ax+b}_{0^+}} = +\infty \Rightarrow x^2+ax+b=\left(x-\sqrt[3]{4}\right)^2$$

$$x^2-\sqrt[3]{32}\,x+\sqrt[3]{16}=x^2+ax+b \rightsquigarrow a=-\sqrt[3]{32} \quad b=\sqrt[3]{16}$$

$$\left[\frac{b}{a}\right]=\left[\frac{\sqrt[3]{16}}{-\sqrt[3]{32}}\right]=\left[-\sqrt[3]{\frac{1}{2}}\right]=-1$$

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$$\lim_{x\to \left(\frac{1}{\sqrt{3}}\right)^+} \frac{[-x]+a}{\left|\frac{\sqrt{3}}{3}x+a\right|+a} = -\infty \rightsquigarrow \lim_{x\to \left(\frac{1}{\sqrt{3}}\right)^+} \frac{a-1}{\left|\frac{1}{3}+a\right|+a}=-\infty$$

$$\left|\frac{1}{3}+a\right|=-a \rightsquigarrow a<0 \rightarrow \frac{1}{3}+a=-a \qquad a=-\frac{1}{6} \qquad [a]=\left[-\frac{1}{6}\right]=-1$$

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$$\lim_{x\to\left(-\frac{1}{2}\right)^+} \frac{16x-\left[-\frac{2}{x^2}\right]}{24x+\left[\frac{3}{x^2}\right]} \rightsquigarrow$$

$$x>-\frac{1}{2} \rightarrow x^2>\frac{1}{4} \rightarrow \frac{1}{x^2}<4 \rightarrow \frac{-2}{x^2}>-8 \rightarrow \left[\frac{-2}{x^2}\right]=-8$$

$$x>-\frac{1}{2} \rightarrow x^2>\frac{1}{4} \rightarrow \frac{1}{x^2}<4 \rightarrow \frac{3}{x^2}<12 \rightarrow \left[\frac{3}{x^2}\right]=11$$

$$=\lim_{x\to\left(-\frac{1}{2}\right)^+} \frac{16x+8}{24x+11}=0$$

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$$\lim_{x\to 2^+} \frac{x^2-4}{x^3-[x^3]}=\lim_{x\to 2^+} \frac{x^2-4}{x^3-8}=\lim_{x\to 2^+} \frac{(x-2)(x+2)}{(x-2)(x^2+2x+4)}=\frac{4}{12}=\frac{1}{3}$$

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$$\lim_{x\to -1} \frac{x^2+10x+14}{12+4\sqrt[3]{x}} \xrightarrow{\text{hôp}} \lim_{x\to -1} \frac{2x+10}{\frac{2}{\sqrt[3]{x^2}}} = \lim_{x\to -1} (x+8)(\sqrt[3]{x^2})$$

$$= -7 \times 4 = \boxed{-12}$$

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$$\lim_{x\to 0^-} \frac{\sqrt{2+3x}-\sqrt{2-x}}{\sqrt{1-\cos x}} \times \frac{\sqrt{2}}{\sqrt{2}} \times \frac{\sqrt{2}}{\sqrt{2}} = \lim_{x\to 0^-} \frac{(2+3x-2+x)\times\sqrt{2}}{|\sin x|\times 2\sqrt{2}}$$

$$\lim_{x\to 0^-} \frac{4x}{-2\sin x} = \frac{4x}{-2x} = \boxed{-2}$$

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$$\lim_{x\to -1} \frac{1-k[x]}{x^2-1} = -\infty \longrightarrow -1^+ : \frac{1+k}{0^-} = -\infty \quad 1+k>0 \to k>-1$$

$$\longrightarrow -1^- : \frac{1+2k}{0^+} = -\infty \quad 1+2k<0 \to k<-\frac{1}{2}$$

$$\Big\} -1<k<-\frac{1}{2}$$

$-\pi < k\pi < -\frac{\pi}{2} \longrightarrow -1 < \cos k\pi < 0 \longrightarrow$ ناصر