کمرصلح محسنی ①

۱۹۱۷۵ آفرین ☆

$$2\left[\frac{2-x}{2}\right] + a\left[\frac{x+2}{3}\right] \quad \begin{cases} -2^{+}: & 2+0 \\ -2^{-}: & 2+a=2 \Rightarrow a=2 \end{cases}$$

$$\left[\frac{a}{c}\right] = 0$$

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②

$$\lim_{x \to \frac{\pi}{6}^-} [2\sin x - 1] = [0^-] = -1$$

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③

$$\lim_{x \to 0.5} [8x^2 - x] = [-1 + \tfrac{1}{2}] = 01$$

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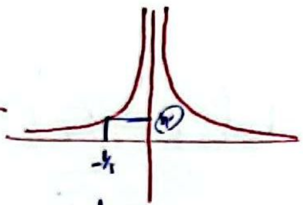
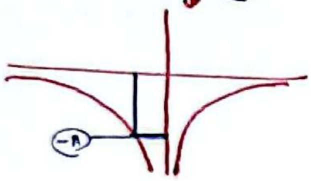
④

$$\lim_{x \to -\frac{1}{2}^-} \frac{\overset{-5}{\cancel{10x}} - 5x\left[\frac{3}{x^2}\right]}{\cancel{10x} - \left[-\frac{3}{x^2}\right]} = \frac{1}{0^-} = -\infty$$

$-11^-$ , $-8$





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⑤

$$\lim_{x \to 1^+} \frac{\frac{1-\cos^2 \pi x}{\sin^2 \pi x}}{\cancel{[x]} + \cos \pi x} = \frac{(1-\cos\pi x)(1+\cos\pi x)}{1+\cos\pi x} = 1-\cos\pi x = 1-(-1) = 2$$

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⑥

$$\lim_{x \to -1} \frac{\sqrt{2x+3} - \sqrt{3x+4}}{1 + \sqrt[3]{x}} \xrightarrow{hop} \frac{\frac{2}{2\sqrt{2x+3}} - \frac{3}{2\sqrt{3x+4}}}{\frac{1}{3\sqrt[3]{x^2}}}$$

جواب آخر؟

$$\frac{1-\frac{3}{2}}{\frac{1}{3}} = -\frac{3}{2}$$

⑦

$$\lim_{x \to 1} \frac{2x - 7\sqrt{x} + 5}{3x - \sqrt{3x+1}} = \frac{\overset{4}{\cancel{2}} - \frac{7}{2\sqrt{x}}}{\cancel{3} - \frac{3}{2\sqrt{3x+1}}} = \frac{-\frac{3}{2}}{\frac{5}{4}} = -\frac{6}{5}$$

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$$\lim_{x\to 0} \frac{a+\sqrt{bx+c}}{x} = \frac{1}{4} \qquad a=-\sqrt{c} \qquad \to \sqrt{c} \quad \frac{ab}{c} \quad \frac{\sqrt{c}}{2} = -\frac{1}{2}$$

(۸)

$$\longrightarrow \text{H.P} \quad \frac{b}{2\sqrt{bx+c}} = \frac{1}{4} \qquad \frac{b}{2\sqrt{c}} = \frac{1}{4} \Rightarrow 2b=\sqrt{c}$$

$$\frac{9+k\left[\frac{x}{\pi}\right]}{\sin x} = +\infty \qquad -2\pi^{+}:\ \sin>0 \quad \frac{4-2k>0}{0^{+}} \quad k<2$$

(۹)

$$\frac{4}{3}<k<2$$

$$-2\pi^{-}:\ \sin<0 \quad \frac{4-3k<0}{0^{-}} \to \frac{4}{3}<k$$

$$\longrightarrow [-k] = -2$$

$$\lim_{x\to 8} \frac{b\sqrt{2+\sqrt[3]{x}}-2b}{ax-b} \qquad \frac{b\left(\frac{1}{3\sqrt[3]{x^2}}\right)}{2\sqrt{2+\sqrt[3]{x}}} \quad \frac{(12)}{(4)} = \frac{b}{48}$$

(۱۰)

$$\Rightarrow 8a-b=0 \qquad 8a=b$$

$$\frac{b}{48a} = \frac{1}{9} \qquad 48a=ab \qquad a$$

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$$\lim_{x\to -1} \frac{\sqrt{2x+3}-\sqrt{3x+4}}{1+\sqrt[3]{x}} \times \frac{\sqrt{2x+3}+\sqrt{3x+4}}{\sqrt{2x+3}+\sqrt{3x+4}} \times \frac{1+\sqrt[3]{x^2}-\sqrt[3]{x}}{1+\sqrt[3]{x^2}-\sqrt[3]{x}}$$

$$= \lim_{x\to -1} \frac{(2x+3-3x-4)(3)}{(1+x)(2)} = \frac{-(1+x)\times 3}{(x+1)\times 2} = -\frac{3}{2}$$