

$$\alpha = -r^+ \rightarrow \frac{+r}{-r} + a(0) = \textcircled{+1}$$

$$\alpha = -r^- \rightarrow r(r) - a = r - a$$

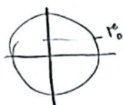
$$r = r - a$$

$$a = r$$

$$\left[\frac{r}{r}\right] = 0$$

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$$\left[\frac{r_0}{1 - \frac{1}{r}} - 1\right] = -1$$

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$$\ln [1 - \frac{r}{r}]$$

$$\alpha \rightarrow -\frac{1}{r}$$

$$\begin{aligned} \xrightarrow{-\frac{1}{r}} & \left[\ln \left(\frac{1 - \frac{1}{r}}{r} \right) - \frac{1}{r} \right] = \textcircled{-1} \\ \xrightarrow{-\frac{1}{r}} & \left[\ln \left(\frac{1 - (-1)}{r} \right) - \frac{1}{r} \right] = \textcircled{-1} \end{aligned}$$

پول راس در صورتی داریم
که در دست داریم

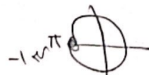
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$$\frac{10x - 20 + 11}{14x - \left[\frac{-r}{\frac{1}{r}} \right] - 9}$$

$$= \frac{10x + 9}{14x - 9} = \textcircled{\frac{1}{-14}}$$

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$$\frac{\sin \pi x}{1 + \cos \pi x} \times \frac{1 - \cos \pi x}{1 - \cos \pi x} = \frac{\sin \pi x (1 - \cos \pi x)}{1 - \cos^2 \pi x}$$



$$= 1 - \cos^2 \pi x = 1 - (-1) = \textcircled{2}$$

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$$\frac{\sqrt{1+x^2} - \sqrt{1-x^2}}{1+\sqrt{x}} \times \frac{p \cdot q}{p \cdot q} \times \frac{opp}{opp} = \frac{-x-1}{1+x \times 1}$$

$$= \frac{-1}{1} \checkmark$$

من أجل $\sqrt{x} = 1$ $\sqrt{x} = 1$

$$\frac{(\sqrt{x}-1)(\sqrt{x}-\frac{1}{\sqrt{x}})}{1-\sqrt{x}}$$

$$\frac{(\sqrt{x}-1)(\sqrt{x}-\frac{1}{\sqrt{x}})}{1-\sqrt{x}} \times \frac{\sqrt{x}+\sqrt{x}+1}{\sqrt{x}+\sqrt{x}+1} = \frac{(\sqrt{x}-1)(\sqrt{x}-\frac{1}{\sqrt{x}})(\sqrt{x}+1)}{(\sqrt{x}+1)(\sqrt{x}-1)}$$

$$= \frac{(\sqrt{x}-1)(\sqrt{x}-\frac{1}{\sqrt{x}})(\sqrt{x}+1)}{(\sqrt{x}+1)(\sqrt{x}-1)}$$

$$\frac{a + \sqrt{bx+c}}{x} \times \frac{a - \sqrt{bx+c}}{a - \sqrt{bx+c}} = \frac{1}{x}$$

$$\frac{a^2 - bx - c}{x(a - \sqrt{bx+c})} = \frac{1}{x}$$

$$\frac{a^2 - bx - c}{a(a - \sqrt{bx+c})} = \frac{1}{a}$$

$$\frac{a^2 - bx - c}{a(a - \sqrt{bx+c})} = \frac{1}{a}$$

$$\frac{F + K \left[\frac{\alpha}{\pi} \right]}{\sin x} = \frac{F + \frac{K \alpha}{\pi}}{\sin x}$$

$$\frac{F + \frac{K \alpha}{\pi}}{\sin x} = \frac{F + \frac{K \alpha}{\pi}}{\sin x}$$

$$\frac{F + \frac{K \alpha}{\pi}}{\sin x} = \frac{F + \frac{K \alpha}{\pi}}{\sin x}$$

$$\frac{b\sqrt{1+x} - rb}{a \times b} = \frac{b\sqrt{1+x} - rb}{a \times b}$$

$$\frac{b(\sqrt{1+x} - r)}{b(\sqrt{x}-1)} \times \frac{opp}{opp} = \frac{(\sqrt{x}-1)(\sqrt{x}+1)}{(\sqrt{x}-1)(\sqrt{x}+1)}$$

$$\lim_{x \rightarrow 1} \frac{r(\sqrt{x}-r)}{(\sqrt{x}-r)(\sqrt{x}+r+\sqrt{x})} = \frac{r}{1} = \frac{1}{1}$$

سوال ۴

$$\underline{x \rightarrow (-\frac{1}{4})^-} \rightarrow x < -\frac{1}{4} \rightarrow x^2 > \frac{1}{4} \rightarrow \frac{1}{x^2} < 4 \rightarrow \frac{4}{x^2} < 16 \rightarrow \left\lceil \frac{4}{x^2} \right\rceil = 11$$

$$\frac{1}{x^2} < 4 \rightarrow -\frac{1}{x^2} > -4 \rightarrow \frac{-4}{x^2} > -16 \rightarrow \left\lfloor \frac{-4}{x^2} \right\rfloor = -17$$

$$\leadsto \lim_{x \rightarrow (-\frac{1}{4})^-} = \frac{1 \cdot x - \infty + 1}{14x - (-1)} = \lim_{x \rightarrow (-\frac{1}{4})^-} = \frac{10x + 4}{14x + 1} = \frac{-\infty + 4}{(-16) + 1} = \frac{1}{0^-} = -\infty$$