

مربعات

$$g\left(\frac{\pi}{2}\right) = \sqrt{r} \quad g(u) = f(\tan u + \sqrt{r} \cos u) \quad f'(u)?$$

19 افین

①

$u = \frac{x}{\sqrt{r}}$

$$f'(u) = f'(\tan u + \sqrt{r} \cos u) \times (r \tan u (1 + \tan^2 u) + -\sqrt{r} \sin u)$$

$$\Rightarrow f\left(\frac{x}{\sqrt{r}}\right) = f(1 + 1) \times (r(2) - 1)$$

$$\Rightarrow f(r) = \frac{\sqrt{r}}{r}$$

$$f(u) = \frac{1 + \cos^2 u}{1 - \cos^2 u}, \quad g(u) = \frac{r}{r \cos u}$$

$$\frac{f'\left(\frac{\sqrt{r}}{r}\right) - r g'\left(\frac{\sqrt{r}}{r}\right)}{(f - rg)\left(\frac{\sqrt{r}}{r}\right)}$$

$$f(u) = \frac{(1 + \cos^2 u)(1 + \cos^2 u - r \cos u)}{(1 - \cos^2 u)(1 + \cos^2 u)} = \frac{1 + \cos^2 u - r \cos u}{1 - \cos^2 u}$$

$$(f - rg)(u) = \frac{\cos^2 u - r \cos u}{r \cos u} = \frac{\cos u (\cos u - r)}{r \cos u} = \cos u - r$$

$$\Rightarrow (f - rg)'(u) = \sin u \Rightarrow \sin\left(\frac{\sqrt{r}}{r}\right) = -\frac{1}{r}$$

$$f_+\left(\frac{r}{\varepsilon}\right) - f_-\left(\frac{r}{\varepsilon}\right) = r\sqrt{a} \quad f(u) = |\varepsilon u - r| \sqrt{a} \quad a = ?$$

②

$$f\left(\frac{r}{\varepsilon}\right) = (\varepsilon u - r) \sqrt{a} \Rightarrow f'\left(\frac{r}{\varepsilon}\right) = \sqrt{a} \left(\sqrt{\frac{r}{\varepsilon} a}\right) + \frac{a}{\sqrt{\frac{r}{\varepsilon} a}} (\varepsilon u - r)$$

$$f\left(\frac{r}{\varepsilon}\right) = (r - \varepsilon u) \sqrt{a} \Rightarrow f'\left(\frac{r}{\varepsilon}\right) = -\sqrt{a} \left(\sqrt{\frac{r}{\varepsilon} a}\right) + \frac{a}{\sqrt{\frac{r}{\varepsilon} a}} (r - \varepsilon u)$$

$$\Rightarrow f\left(\frac{\sqrt{r} a}{\varepsilon}\right) = -\sqrt{r a} = r\sqrt{a} \Rightarrow \varepsilon \sqrt{r a} = r\sqrt{a} \Rightarrow \varepsilon \sqrt{r} = \sqrt{r} \Rightarrow \varepsilon = 1 \Rightarrow a = \frac{1}{r}$$

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$$L'(\varepsilon) = -a$$

⑤

$$y = \frac{a_{n+1} - 1}{n_{n+1}} \rightarrow y' = \frac{a_{n+1} w}{(n_{n+1})^2} = \frac{1}{v} \xrightarrow{w = \frac{d}{v}} \frac{v}{c} \times \frac{v}{c} \times \frac{1}{v} = a_{n+1} w \Rightarrow$$

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1, 1, 0

$\xi =$

④

①

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نیب مقامات بر مبنی $f(x)$ و $u=2$

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

$$y\sqrt{x} - y = \sqrt{x+1} \Rightarrow \sqrt{x}(y-1) = y+1 \Rightarrow \sqrt{x} = \frac{y+1}{y-1} \Rightarrow u = \left(\frac{y+1}{y-1}\right)^2$$

$$f^{-1}(u) = \sqrt{\left(\frac{u+1}{u-1}\right) \left(\frac{-1-1}{(u-1)^2}\right)} \stackrel{u=2}{=} \sqrt{3} \left(\frac{-2}{1}\right) = -2\sqrt{3}$$

$f^{-1}(u) = \left(\frac{u+1}{u-1}\right)^2$

و 5 و 3

$$f(x) = 2 \Rightarrow 2 = \frac{\sqrt{x+1}}{\sqrt{x}-1} \Rightarrow x \geq 9 \Rightarrow (f^{-1}(x)) = \frac{1}{f(x)}$$

$$f'(x) = \frac{\frac{1}{\sqrt{x}}(\sqrt{x}-1) - \frac{1}{\sqrt{x}}(\sqrt{x+1})}{(\sqrt{x}-1)^2} \stackrel{x=9}{=} \frac{\frac{1}{3}(2-2)}{4} = \frac{0}{4} = 0 \Rightarrow (f^{-1}(2)) = -1$$

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$$f(x) = (x^2+1)^{\mu} (a_{\mu+1}) \begin{cases} u=1 \Rightarrow f(x) = 1(-a+1) \\ u=0 \Rightarrow f(x) = 1(1) = 1 \end{cases}$$

$$f'(x) = \frac{-2x(a_{\mu+1}) - (a_{\mu+1})}{(x^2+1)^{\mu+1}} = \frac{-1 \cdot 4 \cdot 1 \cdot a - 1}{1} = -4a - 1 = -11 \Rightarrow 4a = -10 \Rightarrow a = -\frac{5}{2}$$

$$f^{-1}(1) = \sqrt{(a^2+1)^{\mu}} \left(\frac{-1}{\sqrt{a^2+1}}\right) + \dots = \frac{1}{\sqrt{a^2+1}} (a^2+1)^{\mu} = \sqrt{a^2+1} = \sqrt{\frac{25}{4}+1} = \frac{5}{2}$$

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$$y = \sin u \cos v \quad \begin{cases} u = \frac{\pi}{2} \Rightarrow y = \frac{\sqrt{2}}{2} \cos v = 0 \\ u = \frac{\pi}{4} \Rightarrow y = \frac{1}{2} \cos v = 1 \end{cases} \Rightarrow \frac{1}{\frac{\sqrt{2}}{2}} = \frac{1}{\frac{1}{2}} = 2 \Rightarrow \frac{-\frac{\pi}{2}}{\frac{\pi}{4}} = -2$$

$$y = \sin u \cos v \quad \begin{cases} u = \frac{\pi}{2} \Rightarrow \frac{1}{\frac{\pi}{2}} = \frac{1}{\frac{\pi}{2}} = 1 \\ u = \frac{\pi}{4} \Rightarrow \frac{1}{\frac{\pi}{4}} = \frac{1}{\frac{\pi}{4}} = 1 \end{cases} \Rightarrow \frac{1}{\frac{\pi}{2}} = \frac{1}{\frac{\pi}{4}} = 1 \Rightarrow \frac{-\frac{\pi}{2}}{\frac{\pi}{4}} = -2$$

$$\frac{a_n - 1}{w_{n+1}} = \frac{x}{V} + \frac{a}{V} \rightarrow V a_n - V = w_n^r + x + 1 \delta n + a$$

a

$$w_n^r + x(14 - Va) + 12 = 0 \xrightarrow{\Delta z = 0} (14 - Va)^r - 12^r = (14 - Va - 12) (14 - Va + 12)$$

$$a = \frac{f}{V}$$

$$a = f$$

$$a = f \rightarrow w_n^r - 12n + 12 \rightarrow n = 2 \checkmark$$

$$a = \frac{f}{V} \rightarrow w_n^r + 12n + 12 \rightarrow n = -2 \text{ x Ujuzi}$$