

$$f(0) \quad a + |x| \rightarrow 0 \rightarrow 0 \quad ①$$

۲. افزین

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$$\begin{aligned} x < 1 &\rightarrow a + |x| \\ x < 0 &\rightarrow f'_-(0) = -1 \\ &\rightarrow f'_+(0) = 1 \end{aligned}$$

تابع در نقطه $x=0$ مشتق ناپذیر است زیرا

سایر نقاط از جمله $x=1$ مشتق پذیر است

$$x=1 \rightarrow a + 1 = b$$

$$f'_+(1) = b \times \frac{1}{\sqrt{1-x^2}} = \frac{1}{\sqrt{1-x^2}} \quad f'_-(1) = a + x = 1$$

$$\frac{1}{\sqrt{1-x^2}} = 1 \Rightarrow b = \frac{1}{\sqrt{1-x^2}} \quad a = \frac{1}{\sqrt{1-x^2}} \rightarrow \boxed{a+b=2}$$

$$\begin{aligned}
 f(x) &= \frac{2|x-1|}{\sqrt[3]{x^2}} & g(x) &= \frac{|x-1| + \sqrt{14x}}{\sqrt[3]{x^2}} \rightarrow f(x) - g(x) = \frac{2|x-1| - |x-1| - \sqrt{14x}}{\sqrt[3]{x^2}} \\
 &= \frac{-\sqrt{14x}}{\sqrt[3]{x^2}} \rightarrow f'(x) - g'(x) = \frac{-\frac{4}{\sqrt{14x}} (\sqrt[3]{x^2}) - \frac{14}{\sqrt[3]{x^2}} (-\sqrt{14x})}{\sqrt[3]{x^2}} \\
 &= \frac{-\frac{4}{\sqrt{14}} (1) - \frac{14}{\sqrt{14}} (-\sqrt{14})}{\sqrt[3]{x^2}} = -\sqrt{14} + \frac{14\sqrt{14}}{\sqrt[3]{x^2}} = \frac{14\sqrt{14}}{\sqrt[3]{x^2}}
 \end{aligned}$$

بررسی پیوستگی $\rightarrow ab + c = \frac{1}{a}$ مستقر نیستی $\rightarrow b = -\frac{1}{a^2} \pm \frac{1}{a^2} \rightarrow a^2 b = -1$

$\rightarrow a^2 b + ac = -1 \rightarrow ac = 1$

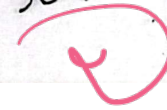
1 a

$$m \geq 1 \rightarrow f'(a) = \frac{f(x) - f(a)}{x - a} = \frac{b + (x-a)^m - b}{x-a} = \frac{(x-a)^m}{x-a}$$

$$\rightarrow m \geq 1 \rightarrow \left. \begin{array}{l} f'_+(a) = 0 \\ f'_-(a) = 0 \end{array} \right\} \rightarrow \text{مستویز}$$

$$\boxed{m=1} \rightarrow \left. \begin{array}{l} f'_-(a) = 0 \\ f'_+(a) = 1 \end{array} \right\} \rightarrow \text{مستویز}$$

$$m=0 \rightarrow \left. \begin{array}{l} b \quad x < a \\ b+1 \quad x \geq a \end{array} \right\} \rightarrow x$$



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

$$g'(x)f'(g(x)) = f'og'(x)$$

$$g(x) = \frac{1}{x^w - (-x^w)} = \frac{1}{1+x^w}$$

$$fog(x) = \frac{1}{\sqrt{1+x \cdot \frac{1}{1+x^w}}} = x \rightarrow f'og'(x) \leq 1$$

$$f'(w) = -a \quad f(w) = -\frac{w}{a} - a$$

$$f(w) = \frac{a}{p} - a \leq -\frac{1}{p}$$

$$f'(w) = \frac{w}{p}$$

$$\rightarrow \frac{f(w)}{f'(w)} = -\frac{1}{p} \times \frac{p}{w} \leq -\frac{1}{w}$$

$$-a + \frac{w}{a} + a = \frac{w}{a} + a = w \rightarrow a = -\frac{w}{2}$$

$$g(x) = \frac{-px}{p\sqrt{(x-1)^p}} = -\frac{1}{\sqrt{x}}$$

$$f(x) =$$

$$g'(x) = \frac{-1}{2\sqrt{x}} \Rightarrow g'\left(\frac{p}{\sqrt{x}}\right) = -\frac{1}{2\sqrt{p}}$$

$$f(x) = p \left(x \left[x^p + \frac{1}{p} \right] \right) \left(\left[x^p + \frac{1}{p} \right] \right)$$

$$\Rightarrow f'(p) = p \times p \times p \times p = 4p$$

$$f \circ g'\left(\frac{p}{\sqrt{x}}\right) = g'\left(\frac{p}{\sqrt{x}}\right) f'\left(g\left(\frac{p}{\sqrt{x}}\right)\right) = -\frac{1}{2\sqrt{p}} \times 4p = -\frac{2p}{\sqrt{p}} \rightarrow \frac{-2\sqrt{p}}{-2\sqrt{p}} = 1$$

2

$$g'(x) = f'(x+1) + \mu f'(\mu x + 10) \rightarrow x=1 \rightarrow g'(1) = f'(1) + \mu f'(10) \quad -1$$

$$f'(1) = \frac{\mu}{p} \rightarrow f'(1+\omega) = \frac{\mu}{p} \rightarrow f'(1) = \frac{\mu}{p} \rightarrow g'(1) = \frac{\mu}{p} + \frac{9}{p} s^4 \quad \Psi$$

$$\text{HOPE} \rightarrow \frac{-\mu f'(\omega-h) f(\omega-h) + \mu f'(\omega-h)}{\omega-h} \Rightarrow \frac{-\mu f'(\omega) f(\omega) + \mu f'(\omega)}{\omega} \quad -9$$

$$f(\omega) = (\omega-1) \sqrt{\lambda} = \mu \quad f'(x) = \frac{\mu}{\sqrt{\lambda+\mu}} + \frac{1}{\mu \sqrt{(\lambda+\mu)\mu}} \quad (\lambda-1) \rightarrow f(\omega) = \mu + \frac{1}{\mu} s \frac{\mu \omega}{\mu}$$

$$\frac{-\mu \times \frac{\mu \omega}{\mu} \times \mu + \frac{\mu \omega}{\mu}}{\omega} = \frac{-\frac{\mu \omega}{\mu} + \frac{\mu \omega}{\mu}}{\omega} = -\frac{\omega}{\mu} + \frac{\omega}{\mu} s^{-\frac{\mu_0 + 1 \omega}{\mu}} s - \frac{\omega}{\mu}$$

2

$$y = \frac{1}{p}x + \frac{1}{q} \text{ as } \frac{1}{p} \rightarrow \text{افساس} \text{ } s-p$$

(1,2)

$$y' = 1x - F \rightarrow 1x - F = -p$$

$\rightarrow x \text{ s } 1$

