

$$f'_x(1) = f'_{-1}(1) = \frac{y}{x\sqrt{xy}} = \frac{y}{x\sqrt{xy}} = 1 = \frac{y}{x} = 1 \quad b = \frac{y}{x} \quad a = \frac{1}{x}$$

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

$$\begin{aligned} (f(x) - g(x))' &= f'(x) - g'(x) = \frac{y(1-x)}{\sqrt{x}} - \frac{y(1-x) + \sqrt{xy}}{\sqrt{x}} \\ &= \frac{-y\sqrt{xy}}{\sqrt{x}} = -\frac{y\sqrt{xy}}{x^{\frac{1}{2}}} = -\frac{y}{\sqrt{x}} \end{aligned}$$

$$ba + c = \frac{1}{a} \Rightarrow ba^p + c = 1$$

$$f_-(a) = f_+(a) \Rightarrow b = -\frac{1}{a^p} \Rightarrow ba^p = -1$$

$$\Rightarrow \boxed{a = p}$$

دَيِّ قَدَار

$$f'_+(a) = \frac{(x-a)^m}{x-a} \neq 0 \quad \text{مقادیر مختلفی از } m \text{ (مثلاً 1)} \quad m < 1$$

[illegible]

$$g'_L(-\tilde{V}_F) f'_L(g_L(-\tilde{V}_F))$$

$$f_{\phi_2}(x) = \frac{1}{\sqrt{\frac{1}{x^p - |x|^p} - \frac{1}{x^p - |x|^p}}} \quad x < 0 \quad = \frac{1}{\sqrt{\frac{1}{x^p} + \frac{1}{|x|^p}}} = \frac{1}{\sqrt{\frac{1}{|x|^p}}} = |x|$$

$$y = -4x - 2 \quad f'(x) - f(x) = 1$$

$$f(x) = -3x - 2 \quad -4 - (-3x - 2) = 1x + 2 = 1 \Rightarrow x = -\frac{1}{3}$$

$$f'(x) = -4 \quad \frac{f(x)}{f'(x)} = \frac{-3(-\frac{1}{3}) - 2}{-4} = \frac{-\frac{1}{3} - 2}{-4} = \frac{-\frac{7}{3}}{-4} = \frac{7}{12}$$

[-1]  $(f \circ g)' = g' f' \circ g = g'(\frac{1}{\sqrt{x}}) f'(1) = 4\sqrt{x} = 12\sqrt{x}$

$g'(x) = \frac{1}{\sqrt{x}} = \frac{1}{\sqrt{x}} = \frac{1}{\sqrt{x}} = \frac{1}{\sqrt{x}}$

$f(x) = 12\sqrt{x} = 12x^{\frac{1}{2}} \Rightarrow f'(x) = 6x^{-\frac{1}{2}} = \frac{6}{\sqrt{x}}$

$g'(\frac{1}{\sqrt{x}}) = \frac{1}{\sqrt{\frac{1}{\sqrt{x}}}} = \sqrt{x}$

$(f \circ g)'(x) = \sqrt{x} \cdot \frac{6}{\sqrt{x}} = 6$

$$g(x) = f(x+1) + f(1-x)$$

$$\Rightarrow g'(x) = f'(x+1) + f'(1-x) \cdot (-1)$$

$$\Rightarrow g'(-1) = f'(-1+1) + f'(1-(-1)) \cdot (-1) = f'(0) - f'(2)$$

$$g'(-1) = 2f'(0) = 2 \cdot 1 = 2$$

$$\lim_{h \rightarrow 0} \frac{f'(a-h) - f'(a-h) + f'(a-h)}{h(a-h)} = \lim_{h \rightarrow 0} \frac{f'(a-h) - f'(a-h) + f'(a-h)}{h(a-h)}$$

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

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

$$\Rightarrow f'(a) = 1 + \frac{1}{2\sqrt{a+1}}$$

$$y = \frac{x}{2} + \frac{1}{x}$$

$$y' = \frac{1}{2} - \frac{1}{x^2} = -1 \Rightarrow x = 1$$

$$y(1) = \frac{1}{2} + 1 = \frac{3}{2}$$