

$$\lim_{x \rightarrow 1^-} f(1) = \lim_{x \rightarrow 1^+} f(1) = f(1) \rightarrow b = a + 1 \rightarrow b - a = 1$$

این نری

$$f'_+(1) = \frac{2b}{3\sqrt[3]{1}} = \frac{2b}{3}$$

$$2b/3 = 1$$

$$b = \frac{3}{2}$$

$$a = \frac{1}{2}$$

$$a + b = \frac{1}{2} + \frac{3}{2} = 2$$

$$f'_-(1) = 1$$

$$f(x) - g(x) = \frac{1}{3\sqrt[3]{x^2}} - \frac{2\sqrt{x^2 - 1} + 2\sqrt{2x}}{3\sqrt[3]{x^2}} = \frac{2|x-1| - 2|x-1| - 2\sqrt{2x}}{3\sqrt[3]{x^2}} = \frac{-2\sqrt{2x}}{3\sqrt[3]{x^2}}$$

$$\frac{-2\sqrt{2}x^{1/2}}{3x^{2/3}} = -\frac{2\sqrt{2}}{3}x^{-1/6} \rightarrow (f-g)'(x) = \frac{2\sqrt{2}}{9}x^{-7/6}\sqrt[3]{x^2}$$

$$(f-g)'(1) = \frac{2\sqrt{2}}{9} = \frac{\sqrt{2}}{3}$$

$$\lim_{x \rightarrow a^-} f(a) = \lim_{x \rightarrow a^+} f(a) = f(a) \rightarrow \frac{1}{a} = ab + c$$

$$a^2b + ac = 1$$

$$f'_+(a) = f'_-(a) \rightarrow -\frac{1}{a^2} = b \rightarrow -\frac{1}{a^2} = b$$

$$a^2b = -1$$

$$ac = 2$$

$$g(x) = \frac{1}{x^2 + x^2} = \frac{1}{2x^2} \quad f(x) = \frac{1}{\sqrt[3]{2x}}$$

۵- در ازای  $f$  اعداد  $(\oplus)$  و  $f$  تعریف نشده هستند

$$f \circ g = \frac{1}{\sqrt[3]{2x \cdot \frac{1}{2x^2}}} = x$$

$$f \circ g'(x) = 1$$

$$f(r) = -ra - \delta \quad f'(r) = -a \quad f'(r) - f(r) = -a + ra + \delta = 2$$

$$ra + \delta = 2 \quad a = -\frac{3}{r}$$

$$f(r) = \frac{2}{r} - \delta = -\frac{1}{r} \quad f'(r) = \frac{3}{r^2}$$

$$\frac{-1/r}{3/r^2} = -\frac{1}{3}$$

$$f \circ g'(x) = g'(x) \cdot f'(g(x)) \quad g'(x) = (x^2 - 1)^{-1/2}$$

آرین نوری

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$$g'(x) = -\frac{1}{2} (x^2 - 1)^{-3/2} \times 2x \rightarrow g'\left(\frac{3}{\sqrt{2}}\right) = -\frac{1}{\sqrt{2}} \quad g\left(\frac{3}{\sqrt{2}}\right) = 2$$

$$f'(x) \rightarrow f(x) = 14x^2 + 1 \quad f'(x) = 28x \rightarrow f'(2) = 56$$

$$\frac{f \circ g'(x)}{-1/\sqrt{2}} = \frac{-1/\sqrt{2} \times 56}{-1/\sqrt{2}} = 56$$

$$g'(x) = f'(x+1) + 3f'(3x+10)$$

$$f'(-1) = f'(1) = f'(9) \leq 0 \quad \text{دره تناوب} \quad -1$$

$$g'(-1) = f'(-1) + 3f'(1) = \frac{3}{4} + \frac{9}{4} = \frac{12}{4} = 3$$

$$f'(x) = \sqrt[3]{x+3} + \frac{1}{3\sqrt[3]{(x+3)^2}} (x-4) \rightarrow f'(0) = 2 + \frac{1}{12} = \frac{25}{12}, \quad f(0) = 2$$

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$$\lim_{h \rightarrow 0} \frac{f(0-h) - 3f(0-h) + 2}{h(0-h)} \xrightarrow{\text{میشال}} \frac{-2f(0-h)f'(0-h) + 3f'(0-h)}{0-h-h}$$

$$= \frac{-2f(0)f'(0) + 3f'(0)}{0} = -\frac{0}{12}$$

$$4y - 3x = 1 \rightarrow y = \frac{1}{4}x + \frac{1}{4} \rightarrow m_{\text{مماس}} = -2 \Rightarrow f'(x) = -2$$

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$$f'(x) = 2x - 4 \rightarrow 2x - 4 = -2 \quad 2x = 2 \quad x = 1 \quad y = 2 \quad \left| \frac{1}{2} \right|$$