

$$a + 1 = b$$

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

$$x \geq 1 \rightarrow f(x) = b|x| = bx$$

$(a+b=1) \leftarrow (a=0) \leftarrow (b=1)$

$$(f - 2g)'(1) \rightarrow \frac{2x-4}{\sqrt[3]{2x}} - 2x \frac{|x-1| + \sqrt{2x}}{\sqrt[3]{2x}} = \frac{-2\sqrt{2x}}{\sqrt[3]{2x}}$$

$$\frac{-2x \cdot \frac{3}{\sqrt[3]{2x}} \times \sqrt[3]{2x} - \frac{2x}{\sqrt[3]{2x}} \times -2\sqrt{2x}}{(\sqrt[3]{2x})^2} \xrightarrow{x=1} \frac{\left(\frac{3}{\sqrt[3]{2}}\right) - \left(\frac{2}{\sqrt[3]{2}} \times -2\sqrt{2}\right)}{1}$$

$$a=1 \quad \left\{ \begin{array}{l} \xrightarrow{\text{مستقیم}} b+c=1 \\ \xrightarrow{\text{مستقیم}} b=-1 \end{array} \right\} c=2 \rightarrow ac=2$$

$$x=a \quad \left\{ \begin{array}{l} \xrightarrow{\text{مستقیم چپ}} 0 \\ \xrightarrow{\text{مستقیم راست}} m(x-a)^{m-1} \end{array} \right\} \begin{matrix} 0 \neq m(x-a)^{m-1} \\ m \neq 0 \end{matrix} \quad (m=1)$$

$$\left. \begin{array}{l} g'(x) = -\frac{3}{4} \times \frac{1}{x^{5/4}} \\ f'(x) = \frac{-2}{\sqrt[3]{(2x)^4}} \end{array} \right\} (f \circ g)'(\sqrt[4]{2}) = \left(-\frac{3}{4} \times \frac{1}{\sqrt[4]{2}^{5/4}} \right) \times \frac{-2}{\sqrt[3]{(2 \times \frac{1}{\sqrt[4]{2}})^4}}$$

$$\frac{1}{\sqrt[4]{2}^{5/4}} \times \frac{1}{\frac{1}{\sqrt[4]{2}^{5/4}}} = \frac{1}{-1\sqrt[4]{2}} = 1$$

$$-a - (-2a - d) = 2 \rightarrow 2a + d = 2 \rightarrow a = -\frac{2}{3}$$

$$\frac{f(x)}{f'(x)} = \frac{-\frac{1}{x}}{\frac{2}{x}} = \left(-\frac{1}{2}\right)$$

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$$\left. \begin{aligned} f(x) &= 2(x[x^2 + \frac{1}{2}]) \\ g(x) &= -\frac{2x}{\sqrt{(x-1)^2}} \end{aligned} \right\} (f \circ g)'(x) = g'(x) \times f'(g(x))$$

$$(f \circ g)'(\frac{2}{\sqrt{2}}) = -\frac{22}{\sqrt{2}} \times 12 \rightarrow \frac{-22 \times 12}{-12 \times \sqrt{2}} = 1$$

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$$g'(-2) = f'(x+1) + 2f'(2x+1) = \frac{2}{3} + 2 \times \frac{2}{3} = \frac{12}{3} = 4$$

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$$\lim_{h \rightarrow 0} \frac{f(d-h) - 2f(d-h) + 2}{dh - h^2} \xrightarrow{\frac{0}{0}} \frac{2f'(d-h) + 2f'(d-h)}{d - 2h} \xrightarrow{h \rightarrow 0} \frac{2f'(d) - 2f'(d)}{d} = -\frac{f'(d)}{d} = -\frac{\frac{20}{12}}{d} = -\frac{d}{12}$$

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$$2y = 2x + 1 \rightarrow y = \frac{1}{2}x + \frac{1}{2} \rightarrow m = \frac{1}{2} \rightarrow m' = -2$$

$$x^2 - 5x + d \xrightarrow{\frac{0}{0}} 2x - 5 = -2 \rightarrow x = 1 \rightarrow (1)^2 - 5(1) + d = 2$$

$$\text{نقطه} = (1, 2)$$

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