

برای برآی

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کلیف شماره ۲۲

تابع در نقطه‌ای مفرشتی ناپه‌یراست: $f_+(0) = 1$ و $f_-(0) = -1$ و $a+1=b$

$$\Rightarrow \frac{2b}{\sqrt[3]{n}} = 1 \Rightarrow b = \frac{3}{2} \Rightarrow a = \frac{1}{2} \Rightarrow a+b = 2$$

$$f(x) = \frac{2|x-2|}{\sqrt[3]{x^2}} \xrightarrow{\text{در نقطه}} \frac{2(2-x)}{\sqrt[3]{x^2}} \text{ و } g(x) = \frac{|x-2| + \sqrt[3]{x}}{\sqrt[3]{x^2}} \xrightarrow{\text{در نقطه}} \frac{(2-x) + \sqrt[3]{x}}{\sqrt[3]{x^2}}$$

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

$$h'(x) = \frac{\frac{2}{\sqrt[3]{x^2}} - \frac{2x}{\sqrt[3]{x^2}} \times \frac{1}{2\sqrt[3]{x}}}{\sqrt[3]{x^2}} = \frac{\sqrt[3]{x}}{2}$$

$$b = \frac{-1}{a^2} \Rightarrow -\frac{1}{a^2} \times a + c = \frac{1}{a} \Rightarrow c = \frac{2}{a} \Rightarrow a+c = 2$$

$$m(x-a)^{m-1} \neq 0 \Rightarrow m=1$$

۴- یک مقدار

$$(f \circ g)' = \frac{1}{\sqrt[3]{\frac{1}{x^3-1x^3} - \frac{1}{1x^3-x^3}}} \xrightarrow{\text{در نقطه}} \frac{1}{\sqrt[3]{\frac{1}{2x^3} + \frac{1}{2x^3}}} = \frac{1}{\sqrt[3]{\frac{2}{x^3}}}$$

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

$$f'(3) = -9 \text{ و } f(3) = -3a - 0 \Rightarrow f'(3) - f(3) = 9a + 0 = 2 \Rightarrow 9a = 2 \Rightarrow a = \frac{2}{9}$$

$$g\left(\frac{\sqrt{x}}{2}\right) = 2 \Rightarrow f\left(g\left(\frac{\sqrt{x}}{2}\right)\right) = (\sqrt{x})^2 + 1$$

$$\Rightarrow (f \circ g)' = \frac{\sqrt{x}}{\sqrt[3]{\sqrt{(x^2-1)^2}}} \times \sqrt[3]{x^2} g'(x) = \frac{\sqrt{x}}{\sqrt[3]{x}} \times \sqrt[3]{x^2} \times \sqrt[3]{x^2} = \sqrt[3]{x^2} \times \sqrt[3]{x^2} = \sqrt[3]{x^4}$$

$$\Rightarrow \frac{\sqrt[3]{x^2} \times \sqrt[3]{x^2} \times \sqrt[3]{x^2}}{-1 \sqrt[3]{x^2}} = -1$$

$$g'(x) = f'(x+1) + 3 f'(3x+1) \Rightarrow f'(-1) + 3 f'(4)$$

$$f'(-1) = f'(4) \Rightarrow g'(-2) = \frac{1}{2} + \frac{9}{2} = \frac{10}{2} = 5$$

$$\frac{(f(\omega-h)-1)(f(\omega-h)-2)}{h(\omega-h)} \quad , \quad f(\omega) = 2$$

$$\Rightarrow \lim_{h \rightarrow 0} \frac{\cancel{f(\omega-h)} - \cancel{f(\omega)}}{-h} \times \frac{\cancel{f(\omega-h)} - \cancel{f(\omega)}}{h - \omega} = - \frac{f'(\omega)}{\omega}$$

$$f'(x) = \sqrt[3]{x+2} + \frac{x-2}{\sqrt[3]{(x+2)^2}} \Rightarrow f'(\omega) = 2 + \frac{1}{12} = \frac{25}{12}$$

$$\Rightarrow \frac{-f'(\omega)}{\omega} = - \frac{\omega}{12}$$

$$y = \frac{1}{x} + \frac{1}{y} \Rightarrow 2x - \varepsilon = -2 \Rightarrow x = 1 \Rightarrow y = 2$$

$$A: \begin{vmatrix} 1 \\ 2 \end{vmatrix}$$