

$$P(\alpha) = b = P(\alpha) \text{ و } P(\alpha) = P(\alpha)$$

$$P'(x) = \begin{cases} 0 & x < \alpha \\ m(x-\alpha)^{m-1} & x > \alpha \end{cases}$$

نکته: اگر $m=1$ باشد، $P(x) = b$ و $P'(x) = 0$ برای $x > \alpha$ و $P'(x) = 0$ برای $x < \alpha$ و $P'(x) = 0$ برای $x = \alpha$

$$-\sqrt[3]{x} < 0 \Rightarrow g(x) = \frac{1}{x^3 + x^3} = \frac{1}{2x^3}$$

$$\Rightarrow \log g(x) = \frac{1}{\sqrt[3]{\frac{1}{2x^3}} - 1 \frac{1}{2x^3}} = \frac{1}{\sqrt[3]{\frac{1}{2x^3}}}$$

$$= \frac{1}{\frac{1}{x}} = x$$

$$\Rightarrow (P(g(x)))' = g'(x) P'(g(x)) = 1$$

$$g'(-\sqrt[3]{x}) P'(g(-\sqrt[3]{x})) = 1$$

$$P(x) = y \Rightarrow P(x) = -x\alpha - \alpha$$

$$P'(x) = -\alpha \Rightarrow P'(x) = \frac{1}{x}$$

$$\Rightarrow -\alpha - (-x\alpha - \alpha) = 1 \Rightarrow x\alpha = -1 \Rightarrow \alpha = -\frac{1}{x}$$

$$P(x) = \frac{1}{x} (x) - \alpha = -\frac{1}{x}$$

$$\Rightarrow \frac{P(x)}{P'(x)} = \frac{1}{x} \times \left(\frac{1}{x}\right) = \frac{1}{x^2}$$

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

$$\Rightarrow g'\left(\frac{\sqrt[3]{14}}{1}\right) = \frac{-\frac{1}{\sqrt[3]{14}}}{\sqrt[3]{\left(\frac{1}{14}-1\right)^4}} = \frac{-\frac{1}{\sqrt[3]{14}}}{\sqrt[3]{\left(-\frac{13}{14}\right)^4}} = -\frac{1}{\sqrt[3]{14}}$$

$$g\left(\frac{\sqrt[3]{14}}{1}\right) = \frac{1}{\sqrt[3]{\frac{1}{14}-1}} = 1$$

$$P(x) = (x^3+1) \Rightarrow 14x^3+1 \Rightarrow P(x) = 14x^3 \Rightarrow P'(x) = 42x^2$$

$$(P(g(x)))' = g'(x) P'(g(x)) = 42 \left(\frac{1}{\sqrt[3]{14}}\right)^2 = \frac{42}{\sqrt[3]{14}} = \frac{42}{\sqrt[3]{14}}$$

مجموعه دایره / دایره دایره

$$P(x) = \begin{cases} a+1 & x < 1 \\ b\sqrt[3]{x} & x > 1 \end{cases}$$

$$\Rightarrow P'(x) = \begin{cases} b\sqrt[3]{x} & x > 1 \\ a+x & 0 < x < 1 \\ a-x & x < 0 \end{cases} \Rightarrow P'(x) = \begin{cases} \frac{1}{3} \frac{b}{\sqrt[3]{x}} & x > 1 \\ 1 & 0 < x < 1 \\ -1 & x < 0 \end{cases}$$

$$P(1) = a+1 = b \Rightarrow a = \frac{1}{3} \left\{ \begin{array}{l} a+b \cdot \frac{1}{3} + \frac{1}{3} = \frac{1}{3} \\ a+b \cdot \frac{1}{3} + \frac{1}{3} = \frac{1}{3} \end{array} \right.$$

$$P'(x) = \frac{(x)(\sqrt[3]{x}) - (\frac{1}{3}\sqrt[3]{x})(x-1)}{(\sqrt[3]{x})^2}, \quad x < 1$$

$$\Rightarrow P'(1) = \frac{-1 - \frac{1}{3}}{1} = -\frac{4}{3}$$

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

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

$$\Rightarrow g'(1) = -1 + \frac{1}{3\sqrt[3]{1}} - \frac{1}{3} - \frac{1\sqrt[3]{1}}{3} = -\left(\frac{1}{3} + \frac{\sqrt[3]{1}}{3}\right)$$

$$P'(1) = g'(1) = -\frac{1}{3} + \frac{1}{3} \left(\frac{1}{3} + \frac{\sqrt[3]{1}}{3}\right) = \frac{\sqrt[3]{1}}{3}$$

$$ab+G = \frac{1}{a} \Rightarrow \frac{1}{a} = \frac{1}{a}$$

$$b = -\frac{1}{a^2} \Rightarrow P'(x)$$

$$\Rightarrow (a)\left(-\frac{1}{a^2}\right) + G = \frac{1}{a} \Rightarrow G = \frac{1}{a} + \frac{1}{a}$$

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

$$f'(-1), f'(\xi), f'(9), \dots \quad \langle 2 \rangle \text{ ب } \omega \text{ و } \bar{\omega} \text{ و } f'_{\mu} - \bar{\lambda}$$

$$g'(n) = f'(n+1) + \psi f'(\psi n + 10)$$

$$g'(-2) = \underbrace{f'(-1)}_{\frac{\psi}{\gamma}} + \underbrace{\psi f'(\xi)}_{\frac{\psi}{\gamma}} = \frac{\psi}{\gamma} + \frac{9}{\gamma} \sqrt{\frac{\psi}{\gamma}}$$

$$f'(x) = \sqrt[3]{x+\psi} (1) + \frac{(x-\xi)}{\psi \sqrt[3]{(x+\psi)^2}} \quad -9$$

$$\Rightarrow f'(0) = \sqrt[3]{1} + \frac{1}{\psi \sqrt[3]{1^2}} = 1 + \frac{1}{\psi} = \frac{\psi+1}{\psi}$$

$$\lim_{h \rightarrow 0} \frac{f(\delta-h) - \psi f(\delta-h) + \gamma}{h(\delta-h)} \quad \text{loop}$$

$$\frac{-\gamma f(\delta-h) f'(\delta-h) + \psi f'(\delta-h)}{\delta - \gamma h}$$

$$\Rightarrow \frac{-\gamma f(\delta) f'(\delta) + \psi f'(\delta)}{\delta}$$

$$= \frac{(-\gamma)(\gamma) \left(\frac{\gamma\delta}{\psi} \right) + (\psi) \left(\frac{\gamma\delta}{\psi} \right)}{\delta} = \frac{-\gamma\delta}{\delta} = -\gamma \quad \left(\frac{-\delta}{\psi} \right)$$

$$\gamma y - \psi x = 1 \Rightarrow m = \frac{-a}{b} = \frac{\psi}{\gamma} = \frac{1}{\gamma} \quad -10$$

$$\Rightarrow \text{الميل } m = -\gamma \Rightarrow f'(x) = -\gamma$$

$$f'(x) = \gamma x - \varepsilon \xrightarrow{f'(x) = -\gamma} \gamma x - \varepsilon = -\gamma$$

$$\rightarrow \gamma x = -\gamma \rightarrow x = -1 \Rightarrow f(-1) = 1 - \varepsilon + \omega = -\gamma$$

$$\Rightarrow \text{نقطة} = (-1, \gamma) \quad \checkmark$$