

۱۹ آفریب

$$\frac{f(x) - f(1)}{x-1} = \frac{1 - \frac{a}{x^p} - (1-a)}{x-1} = \frac{a}{x^p}$$

$$f'(x) = \frac{a}{x^p}$$

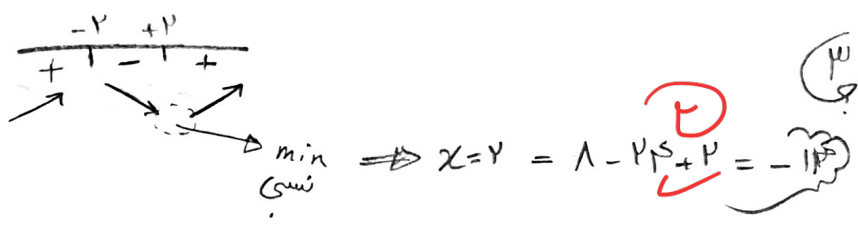
$$\Rightarrow \frac{a}{x^p} = \frac{a}{x^p} \Rightarrow x = \pm \sqrt[p]{\frac{a}{a}} \Rightarrow \begin{cases} -\sqrt[p]{\frac{a}{a}} \\ +\sqrt[p]{\frac{a}{a}} \end{cases}$$

$$y' = f(x) - \omega \xrightarrow{x=A} f(A) - \omega = -1 \Rightarrow aA = 1 \Rightarrow A = \frac{1}{a}$$

$$paA^p - \omega A + 1/a = A \Rightarrow paA^p - \omega A + 1/a = A \Rightarrow \frac{1}{a} - \frac{p}{a} + 1/a = 0$$

$$1 - p + 1/a = 0 \Rightarrow 1/a = p - 1 \Rightarrow a = \frac{1}{p-1}$$

$$y' = px^p - 1 \Rightarrow x = \pm \sqrt[p]{\frac{1}{p}}$$

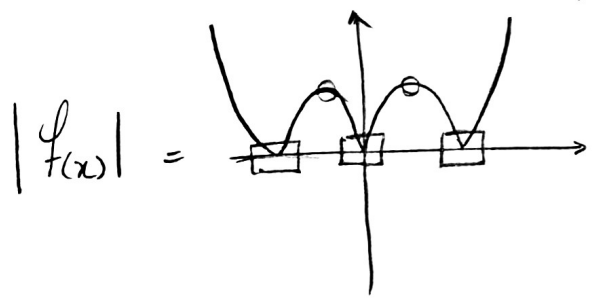


$$y' = px^p + pax - pb \xrightarrow{x=0} y'=0 \Rightarrow b=0$$

$$\xrightarrow{x=-p} y'=0 \Rightarrow 0 = 1 - pa \Rightarrow a = \frac{1}{p}$$

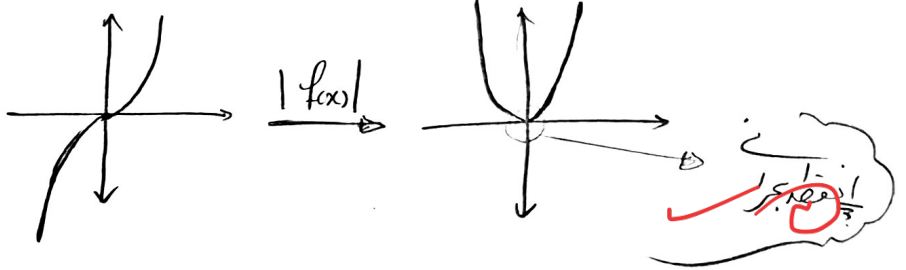
$$y = x^p + px^p - 1$$

$$\left. \begin{array}{l} | \cdot (-1) \\ | \cdot (-p) \end{array} \right\} \Rightarrow \text{mod} = \sqrt{(-1)^p + (-p)^p} \Rightarrow \sqrt{1 + p^p} = \sqrt{1+p^p}$$



$$y_0 \rightarrow \max = m \Rightarrow \frac{n}{m} = \frac{p}{1-p}$$

$$f(x) \begin{cases} x > 0 \rightarrow x^p + px^p \\ x < 0 \rightarrow -x^p + px^p \end{cases}$$



$$f'(x) = 0 \Rightarrow -(x-a)(x)^{\frac{p}{p-1}} = 0 \Rightarrow x = \frac{\frac{p}{p-1}a + 1(0)}{1 + \frac{p}{p-1}} = \frac{\frac{pa}{p-1}}{\frac{2p-1}{p-1}} \leftarrow \text{نقطه } \delta$$

$$\Rightarrow -\left(\frac{pa}{p-1} - a\right) \sqrt{\left(\frac{pa}{p-1}\right)^{\frac{p}{p-1}}} = \frac{pa}{p-1} \sqrt{\left(\frac{pa}{p-1}\right)^{\frac{p}{p-1}}} = \frac{p^{\frac{p}{p-1}}}{p-1} \Rightarrow \frac{a^{\frac{p}{p-1}}}{p^{\frac{p}{p-1}}} \times \frac{pa^{\frac{p}{p-1}}}{p-1} = \frac{1}{p} \xrightarrow{x^{\frac{p}{p-1}}} pa^{\frac{p}{p-1}} = \frac{1}{p}$$

$$\Rightarrow a^{\frac{p}{p-1}} = \frac{1}{p^{\frac{p}{p-1}}} \Rightarrow a = \frac{1}{p} = \frac{1}{p}$$

$$\begin{cases} x < -1 \rightarrow \text{تعریف نسبی} \\ -1 < x < 0 \rightarrow \sqrt{-x^p - x} \\ 0 < x < 1 \rightarrow \text{تعریف نسبی} \\ x > 1 \rightarrow \sqrt{x^p - x} \end{cases}$$



1, 1, 0

$$\min_{نسبی} = 0 \quad \max_{نسبی} = 1 \quad \text{مجموعی} = \frac{1}{p} \Rightarrow \frac{1+0}{1-0} = 1$$

$$y' = \frac{m(x-1+m) - (mx+p)}{(x-1+m)^2} = \frac{m^2 - m - p}{(x-1+m)^2}$$

$$\Rightarrow m^2 - m - p < 0 \Rightarrow \frac{-1 \pm \sqrt{1+4p}}{2} \Rightarrow m = -1, 0, 1$$

1, 1, 0

$$f(x) \begin{cases} x > 0 \xrightarrow{(x+1)} \frac{x}{1-x^p} \\ x < 0 \rightarrow \frac{x}{1+x^p} \end{cases}$$

$$\Rightarrow f'(x) = \begin{cases} x > 0 \xrightarrow{x+1} \frac{1+x^p}{(1-x^p)^2} \\ x < 0 \rightarrow \frac{1-x^p}{(1+x^p)^2} \end{cases}$$

$$\Rightarrow \frac{1-x^p}{1+x^p} = 0 \Rightarrow 1-x^p = 0 \Rightarrow x = \pm 1 \rightarrow \begin{matrix} +1 \\ -1 \end{matrix}$$

نقطه بحر

$$k a n^2 - \omega n + 1 \wedge a = n \rightarrow k a n^2 - \omega n + k a n z \rightarrow a n^2 - \omega n + a a z$$

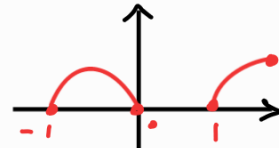
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$$\Delta z = 0 \rightsquigarrow 4 - 4 a^2 z = 0 \rightarrow a^2 = \frac{1}{z} \rightsquigarrow a = \pm \frac{1}{\sqrt{z}}$$

اگر $a = \frac{1}{\sqrt{z}}$ ؛ بزرگی عبارت مثبت می شود
در روی سینه نامیه سوم من افتد پس $a = -\frac{1}{\sqrt{z}}$

$$y = x|x| - x \begin{cases} x^2 - x & x > 0 \\ -x^2 - x & x \leq 0 \end{cases}$$

عملیات



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مینیمم نسبی
(n=0)

نقطه Max نسبی
(m=1)

نقطه ای برای هر دو
(k=2)

$$\frac{k+m+n}{k-n} = \frac{2+0}{2} = 1$$

$$f'(n) < 0 \rightarrow m^2 - m - 2 \leq 0 \rightarrow -1 \leq m \leq 2, m \neq 2 \rightsquigarrow -1 \leq m < 2$$

$$x \text{ (ریشه منفی)} \rightarrow 1 - m \leq 1 \rightarrow m \geq 0$$

$$1, 2 \rightsquigarrow m = 0 \leq 1$$

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