

۱۲، ۷۵

$$f(n+1) \begin{cases} p_{n+1} & n \geq 1 \\ p_{n-1} & n < 1 \end{cases}$$

$$f(n) \begin{cases} p(n-1) + 1 = p_n - 1 & n \geq 1 \\ p(n-1) - 1 = p_n - 1 & n < 1 \end{cases}$$

$$f(p-n) \begin{cases} p(p-n) - 1 = p - p_n - 1 = -p_n + 1 & n \geq 1 \\ p(p-n) - 1 = -p_n + 1 & n < 1 \end{cases}$$

$$f(n+1) \begin{cases} p(n+1) - 1 = p_n + p & n \geq 1 \\ p(n+1) - 1 = p_n - 1 & n < 1 \end{cases}$$

$$f(p-n) - f(n+1) \begin{cases} -p_n + 1 - p_n + 1 = -2p_n + 2 > 0 \Rightarrow p_n < 1 \\ -p_n + 1 - p_n + 1 = -2p_n + 2 > 0 \Rightarrow p_n < 1 \end{cases} \Rightarrow n = (-\infty, 1]$$

$$\begin{cases} -p_n + 1 - p_n + 1 = -2p_n + 2 > 0 \Rightarrow p_n < 1 \\ -p_n + 1 - p_n + 1 = -2p_n + 2 > 0 \Rightarrow p_n < 1 \end{cases} \Rightarrow n = (-\infty, 1]$$

$$-p_n + 1 - p_n + 1 = -2p_n + 2 > 0 \Rightarrow p_n < 1$$

$$Dy = (-\infty, 1]$$

راه پستی و روشی جدید

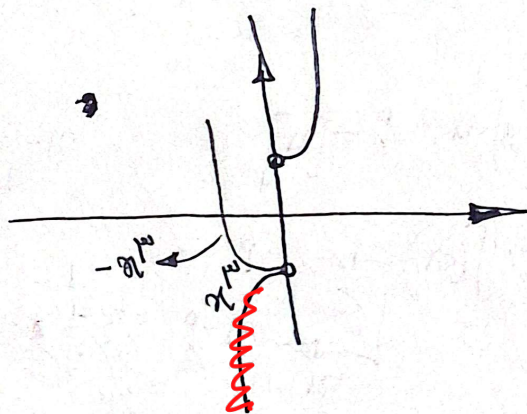
$$\begin{array}{ccc}
 f(x^p) & \gg & f \circ f(x) \\
 \downarrow & & \downarrow \\
 f(x^p) & \gg & f((x^p + x)^p) \\
 \downarrow & & \downarrow \\
 \text{مجموعه} & & \text{مجموعه}
 \end{array}$$

$\rightarrow$

$$\begin{array}{c}
 x^p \mid (x^p + x)^p \\
 \hline
 x \mid x^p + x
 \end{array}
 \Rightarrow x \mid x^p \Rightarrow x \mid 0 \Rightarrow (-x, 0)$$

(2)

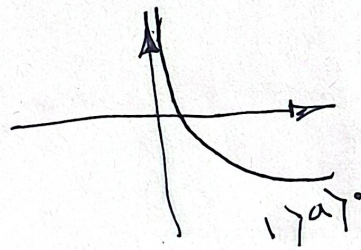
$$\begin{aligned} \frac{a}{\sqrt{2}} &\rightarrow |a^p_+| \\ \frac{a}{\sqrt{2}} &\rightarrow |a^p_-| \end{aligned}$$



نتیجه

۲

پستی ...



$$y = \frac{1}{p} \left(\frac{a^2 - 2a - 1}{a} \right) - 5$$

ϕ 5

$$(a^2-3)^n \rightarrow a^2-3 \neq 0 \quad a^2 > 3$$

$$\Rightarrow a > \sqrt{3} \quad a < -\sqrt{3}$$

$$a > \sqrt{3} \quad a < -\sqrt{3}$$

$$\frac{0}{-4} \quad \left(\frac{1}{2} \right)$$

(ب)

$$1) \quad a^2-3=0 \rightarrow a=\pm\sqrt{3}$$

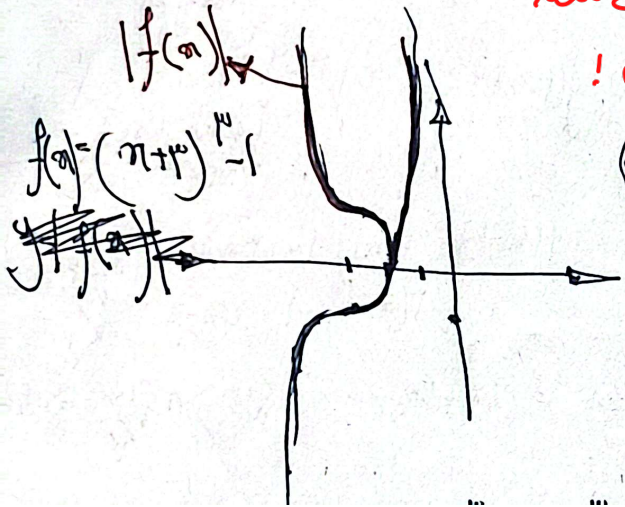
چون سوال نلغته تابع غير!

$$(a^2-3)^n \rightarrow a^2-3 \neq 0$$

$$\Rightarrow a > \sqrt{3} \quad a < -\sqrt{3}$$

$$2) \quad a \geq \sqrt{3} \quad a \leq -\sqrt{3}$$

$$\textcircled{2} \quad -v$$



$$(x+3)^3-1=0$$

$$\Rightarrow x=-3$$

$$x=0 \Rightarrow f(x)=27$$

$$\Rightarrow k=-3$$

$$(-3, +\infty)$$

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

$$x = -\frac{b}{a} = -\frac{1}{p} \quad \text{--- ١٢٥}$$

$$x = 0 \rightarrow \frac{1}{x} = -\frac{1}{x} = -1$$

$$y_{\max} = -1$$

$$\Rightarrow \sqrt{x} \geq x + \sqrt{x-1} \Rightarrow x-1 \leq 0 \Rightarrow x \leq 1$$

$$f_0 f(x) \xrightarrow{\text{نقطه صفر}} f(x) \geq 0 \rightarrow x \geq 1$$

$$\Rightarrow [1, 2] \text{ روعده}$$

$$\begin{aligned}
 & \cos \alpha \Rightarrow \begin{cases} \sqrt{9-1} = \sqrt{8} = 2\sqrt{2} \\ \sqrt{-1} = i \end{cases} \Rightarrow \begin{cases} 2\sqrt{2} - i \\ 2\sqrt{2} + i \end{cases} \\
 & \Rightarrow [a, b] \quad b-a = 2\sqrt{2} - (-2\sqrt{2}) = 4\sqrt{2} \\
 & \Rightarrow [2\sqrt{2}, 6\sqrt{2}] \quad \checkmark
 \end{aligned}$$

