

Subject:

Year. Month. Date. ()

۲۰

درای دایره درستی

$$f(x) \rightarrow D_{f(x)} = [-1, 1]$$

(۲) (۱)

$$f\left(\frac{x_n + 1}{\omega}\right) \rightarrow -1 \leq \frac{x_n + 1}{\omega} \leq 1 \rightarrow -\omega \leq x_n + 1 \leq \omega \rightarrow -\omega - 1 \leq x_n \leq \omega - 1 \rightarrow D_f = [-\omega - 1, \omega - 1]$$

$$f(x_n - 1) \rightarrow D = [-1, 1]$$

(۲) (۲)

$$x_n - 1 \rightarrow x_n - 1 - 1 = -1$$

$$x_n = 1 \rightarrow x_n - 1 = 1$$

$$D_f = [-1, 1]$$

$$f\left(\frac{x_n + 1}{\omega}\right) \rightarrow D = [-1, 1]$$

(۲) (۳)

$$x_n = -1 \rightarrow \frac{x_n - 1 + 1}{\omega} = -1$$

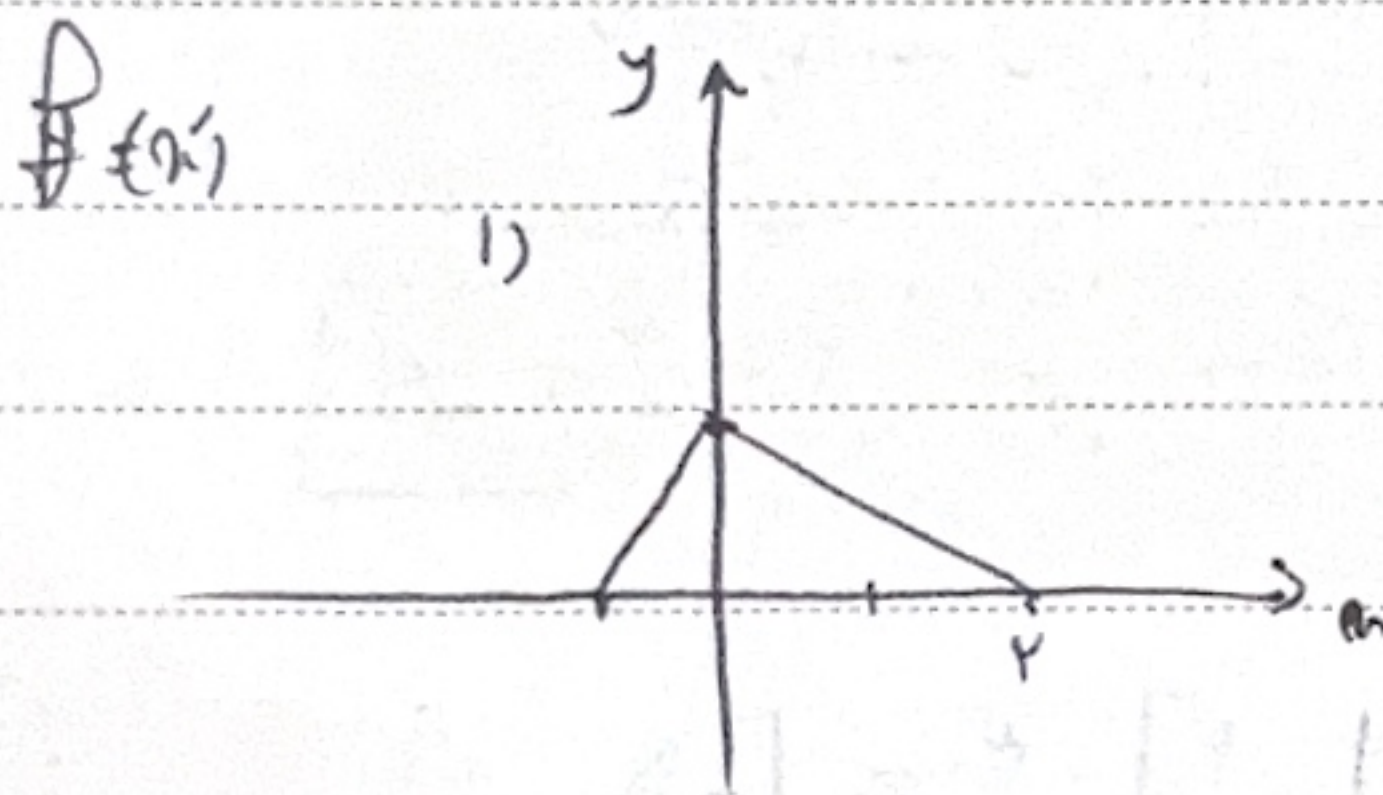
$$x_n = 1 \rightarrow \frac{x_n - 1 + 1}{\omega} = 1$$

$$f(x) \rightarrow D_f = [-1, 1]$$

$$-1 \leq \frac{x_n - 1 + 1}{\omega} \leq 1 \rightarrow -\omega \leq x_n - 1 \leq \omega$$

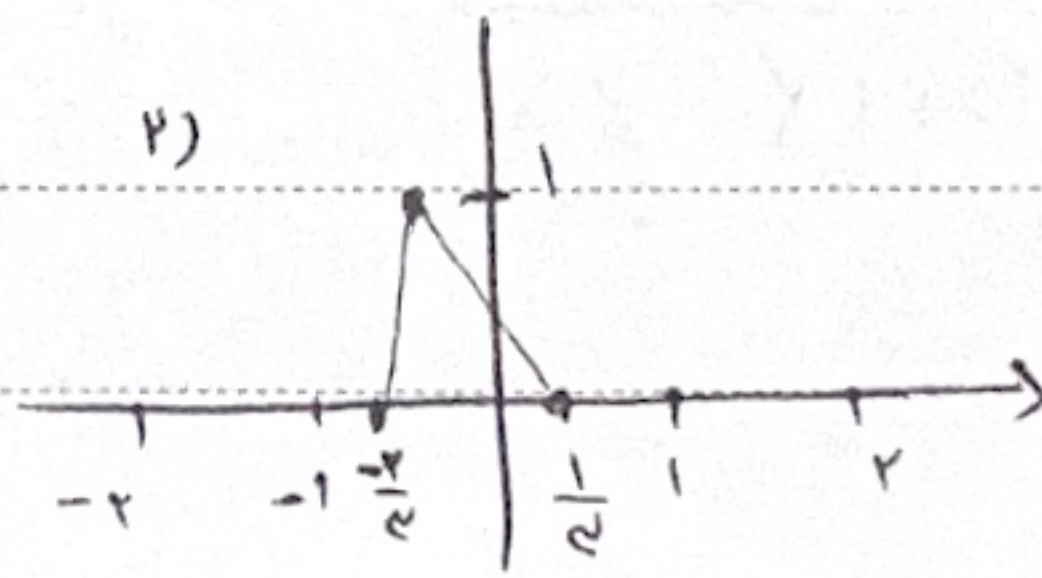
$$-\omega \leq x_n \leq \omega + 1 \rightarrow D_f = [-\omega, \omega + 1]$$

$$D_{f(x - \omega)} = \left(-\frac{\omega}{\omega}, \frac{\omega}{\omega}\right)$$



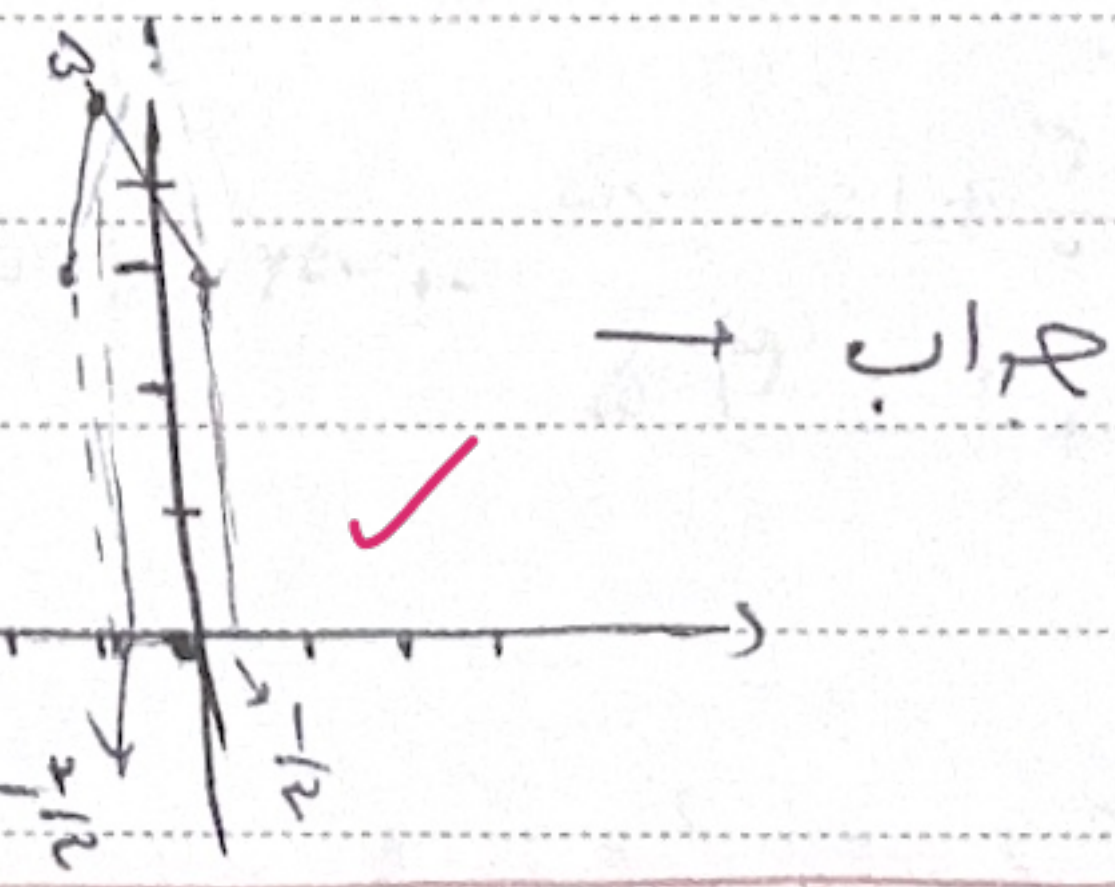
$$f\left(\frac{x_n + 1}{\omega}\right) \rightarrow -1 \leq \frac{x_n + 1}{\omega} \leq 1 \rightarrow -\omega \leq x_n + 1 \leq \omega \rightarrow -\omega - 1 \leq x_n \leq \omega - 1$$

(۲) (۴)

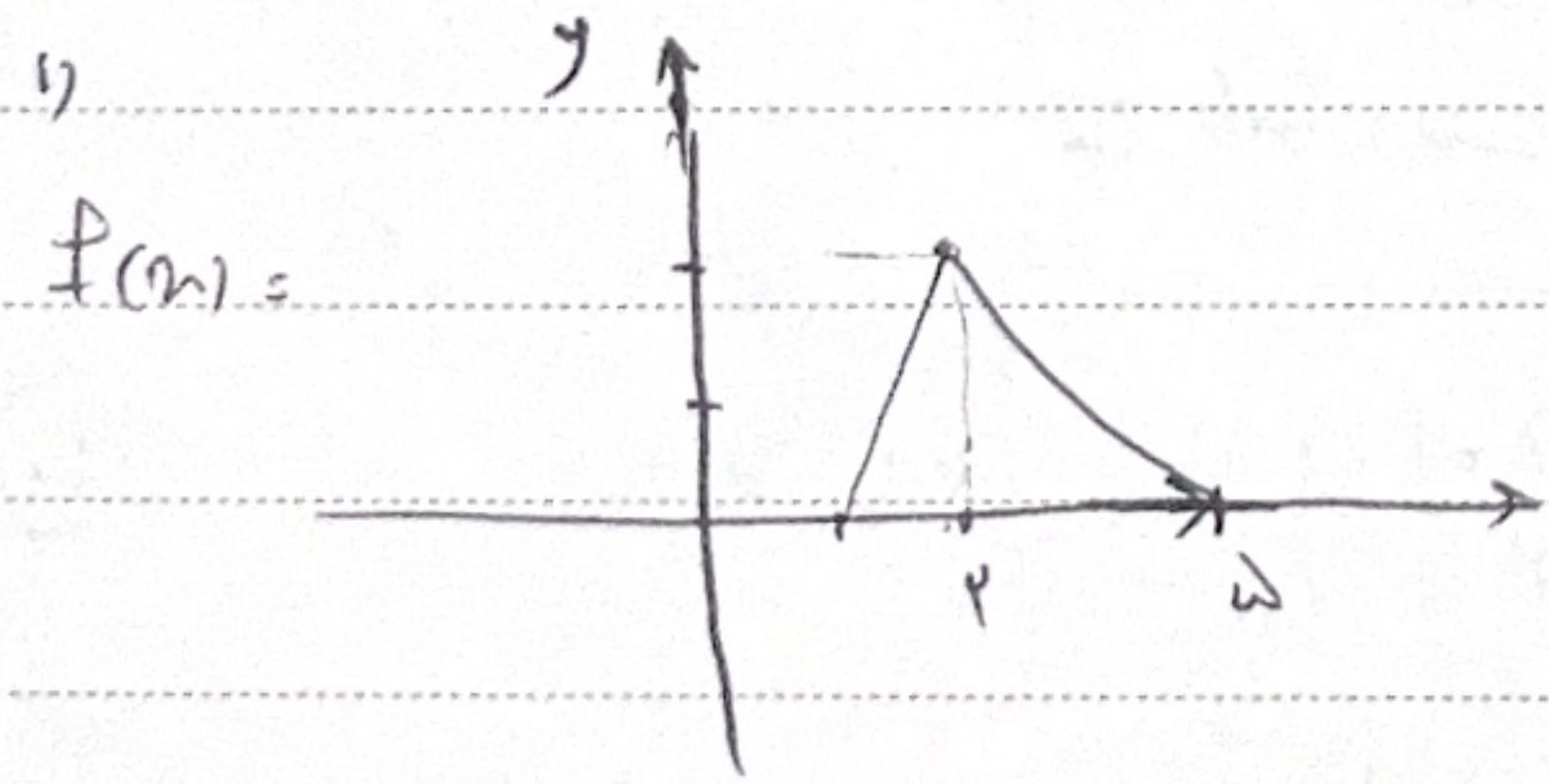


(۲)

$$f\left(\frac{x_n + 1}{\omega}\right) + 1 \rightarrow \frac{x_n + 1}{\omega} + 1 = \frac{x_n + \omega + 1}{\omega}$$



ب. ا. پ



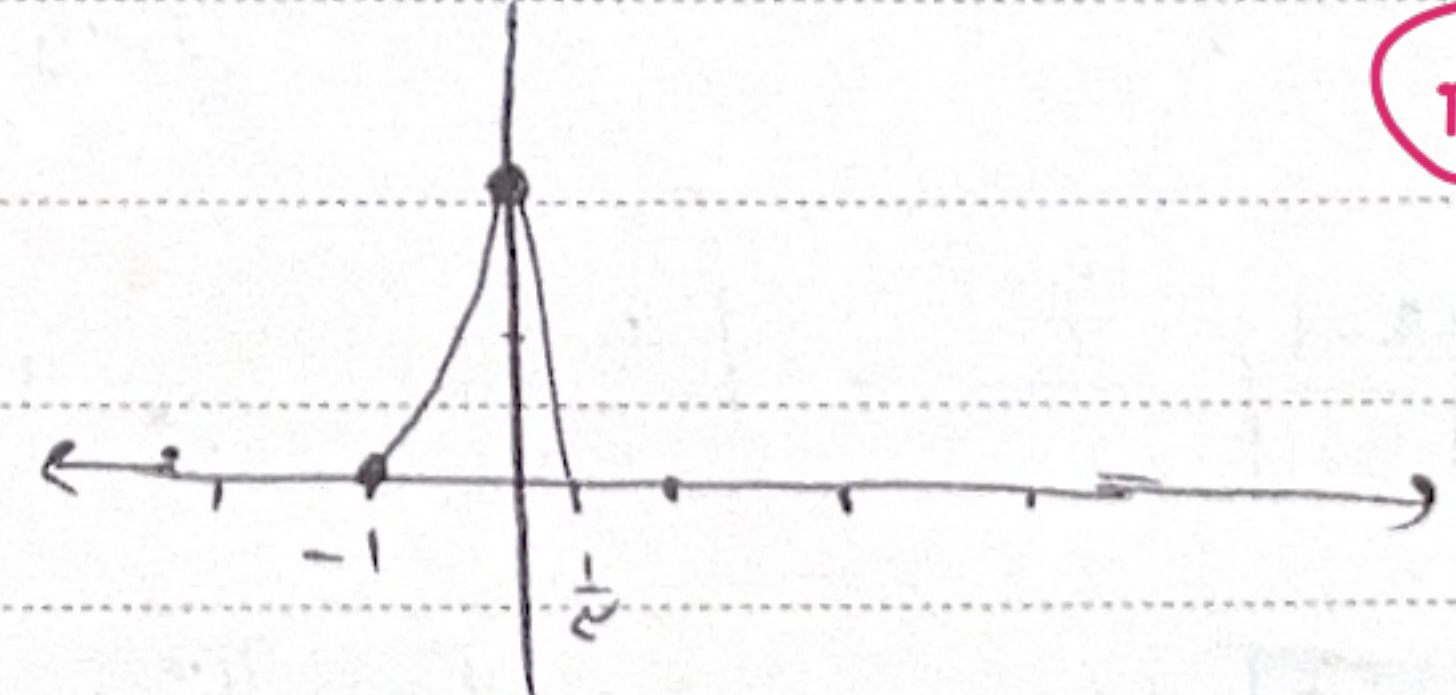
$$f(x - x_n)$$

$$1 \leq x - x_n \leq \omega$$

$$-\omega \leq x - x_n \leq -1$$

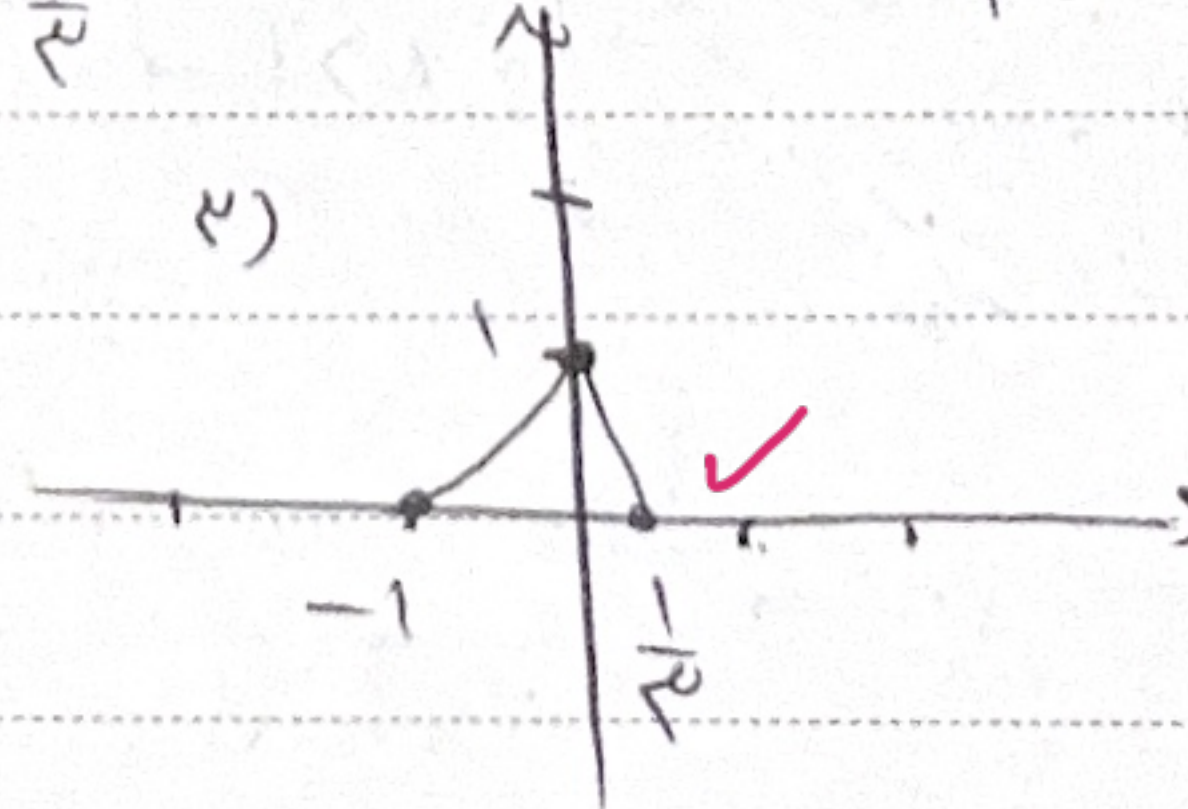
$$-1 \leq x_n \leq 1$$

$$-1 \leq x_n \leq \frac{1}{\omega}$$



(۲)

$$\frac{1}{\omega} f(x - x_n) \rightarrow \frac{1}{\omega} [-1, 1] \rightarrow [-1, 1]$$

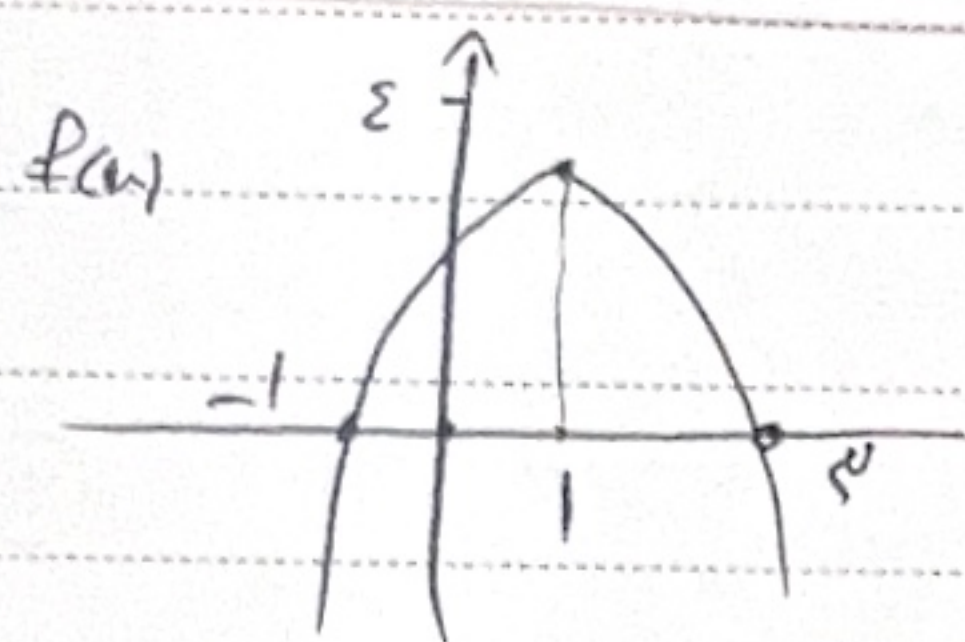


$$y = -\frac{1}{p}x^2 + \frac{r}{2}x + 1 \rightarrow \text{ext} \left| \begin{array}{c} \frac{r}{2} \\ \frac{r}{2p} \end{array} \right| \rightarrow \left(\frac{r}{2}, \frac{r}{2p} \right) \xrightarrow{\text{int}} (\varepsilon, \nu)$$

$$-\frac{1}{p} \left(x - \frac{r}{2} \right)^2 + \frac{r}{2p} \xrightarrow{\text{int}} -\frac{1}{p} (x - \varepsilon)^2 + \nu = -\frac{1}{p} (x^2 - 2x + 1) + \nu$$

$$-\frac{1}{p}x^2 + \frac{1}{p}x - \frac{1}{p} + \frac{r}{2p} = -\frac{1}{p}x^2 + \frac{1}{p}x - \frac{1}{p}$$

$$-\frac{1}{p}x^2 + \frac{1}{p}x - \frac{1}{p} = -x^2 + 1x - 1 \rightarrow (-x+1)(x-1) = -x^2 + x - 1 \rightarrow \boxed{x = 1}$$



$$f(x) = -(x+1)(x-1) = -x^2 + x + 1$$

$$-(x-1)^2 - \varepsilon = -(x-1)^2 + \varepsilon \xrightarrow{x \text{ int}} -(\frac{r}{2}x + 1)^2 + \varepsilon = -(\frac{r}{2}x + 1)^2 + \varepsilon \xrightarrow{x-1} \frac{r}{2}(\frac{r}{2}x + 1)^2 - 1 \rightarrow 1 \wedge (x + \frac{1}{p})^2 - 1$$

$$A(\alpha, \beta) = \left(-\frac{1}{p}, -1 \right) \rightarrow \alpha\beta = -\frac{1}{p}x - 1 = \boxed{\frac{1}{p}}$$

$$D_f = (a, \varepsilon)$$

$$D_g = [-1, b)$$

$$y = f(x-1) + g(x+1)$$

$$\begin{array}{l} a < x-1 < \varepsilon \\ a+1 < x < \varepsilon+1 \end{array} \quad \begin{array}{l} -1 < x+1 < b \\ -2 < x < b-1 \end{array} \quad \left\{ \begin{array}{l} b-1 = a \rightarrow b = a+1 \\ a+1 = -2 \rightarrow a = -3 \\ a-b = -3 - (a+1) = -4 \end{array} \right.$$

$$y_1 = f\left(\frac{x}{p} + 1\right)$$

$$x = -2 \rightarrow -\frac{r}{p} + 1 = -1 \rightarrow -\frac{r}{p} = -2 \rightarrow r = 2p$$

$$x = \omega \rightarrow \frac{\omega}{p} + 1 = 2 \rightarrow \omega = p$$

$$r f(x) - 2 \rightarrow r [-2 \ 2] - 2 = [-2 \ 1]$$

$$\sqrt{[-2 \ 1]} = [0 \ \omega]$$

$$\sqrt{[-2 \ \omega]} \Rightarrow R_{f,2} [-2 \ \omega] \quad D_f = [-2 \ \omega]$$

* چون در عبارت زیر رادیکال می آید پس عبارت زیر رادیکال باید مثبت باشد
 هم باید درست است و بر مسم از 0 شروع می شود

$$f(x) = \left| \frac{x+1}{x-1} \right| \xrightarrow{x-1} \left| \frac{(x-1)+1}{x-1} \right| = \left| \frac{x}{x-1} \right| \xrightarrow{x \text{ int}} \left| \frac{x-1}{x-1} \right| + 1 = g(x)$$

$$x + g(x) = x + \left| \frac{x-1}{x-1} \right| < 0 \rightarrow x + 1 + \frac{x-1}{x-1} < 0 \rightarrow x + 1 + \frac{x-1}{x-1} < 0$$

$$\frac{x^2 - x + x - 1 + x - 1}{x-1} = \frac{x^2 - 2}{x-1} \rightarrow \frac{x(x-\sqrt{2})(x+\sqrt{2})}{x-1} \rightarrow \frac{-\sqrt{2} \ \sqrt{2} \ x}{-1 + -1} \rightarrow \boxed{(-\infty, -\sqrt{2})}$$

عقده زیر 1 و 1