

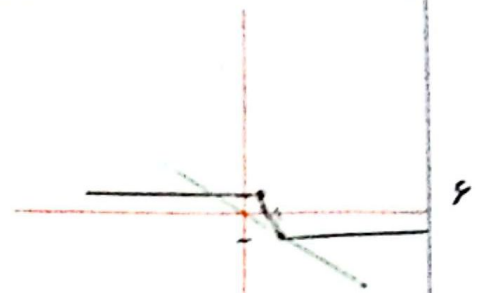
$$|n-2| - |n-1| = kx$$

مربع

$(2, -1), (1, 1)$

$$(x_1 - 1), (0, 0) \rightarrow kx = y \rightarrow 2k = -1$$

$$k = -\frac{1}{2}$$



الف) $x[n]$

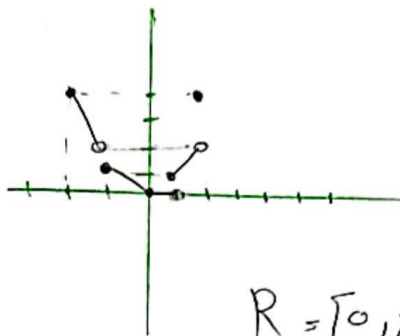
$\leftrightarrow \varepsilon$

$[1, 2) \rightarrow x$

$[0, 1) \rightarrow 0$

$[-1, 0) \rightarrow -x$

$[-2, -1) \rightarrow -x$



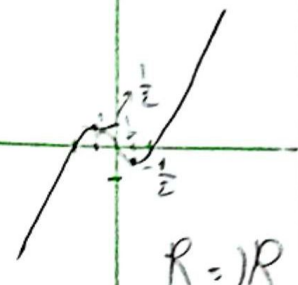
$$R = [0, \varepsilon]$$

ب) $x[n] - x$

$$x \geq 0 \rightarrow x^2 - x = (\frac{1}{2} - \frac{1}{2})$$

$$x < 0 \rightarrow -x^2 - x$$

$$\frac{1}{-2}$$

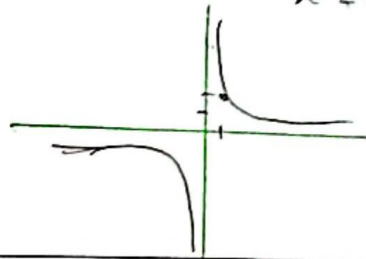


$$R = \mathbb{R}$$

رشته های منتهی
سوی 9-13

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

$$x = \mathbb{R} - \{0, -2\}$$



$$x = -1$$

$$\frac{x - \varepsilon\sqrt{x} + x^2 - 1}{x - \varepsilon\sqrt{x} + 1} = y \rightarrow \sqrt{x} = t \rightarrow \frac{t^2 - \varepsilon t + x}{t^2 - \varepsilon t + 1} = y \rightarrow t^2 - \varepsilon t + x = y t^2 - \varepsilon y t + y$$

$$t^2(1-y) + t(\varepsilon y - \varepsilon) + (x-y) = 0 \rightarrow \Delta \geq 0 \quad \varepsilon y^2 + 14 - 14y + y^2 + x - \varepsilon y \geq 0$$

$$\varepsilon y^2 - \varepsilon y + 14 \rightarrow 2 \pm \frac{\sqrt{5}}{2} \quad \frac{2 \pm \frac{\sqrt{5}}{2}}{2} \quad (-\frac{14}{2}, 2 - \frac{\sqrt{5}}{2}] \cup [2 + \frac{\sqrt{5}}{2}, \infty)$$

$$R = [0, 2 - \frac{\sqrt{5}}{2}] \cup [2 + \frac{\sqrt{5}}{2}, \infty)$$

$$t = \sqrt{x}$$

$$\frac{x^2 + 2x^2 - x - 2}{x^2 - 1} = \frac{(x+1)(x+1)(x-2)}{x^2 - 1} = x + 2 \rightarrow \mathbb{R}$$

$$\pm 1 \rightarrow \frac{1}{x} \rightarrow 1$$

$$R = \mathbb{R} - \{2, 1\}$$

$$x+1 = \varepsilon$$