

طیف سری

در ادامه

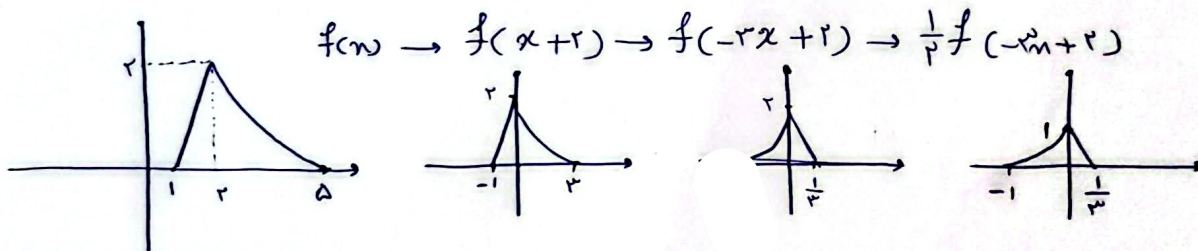
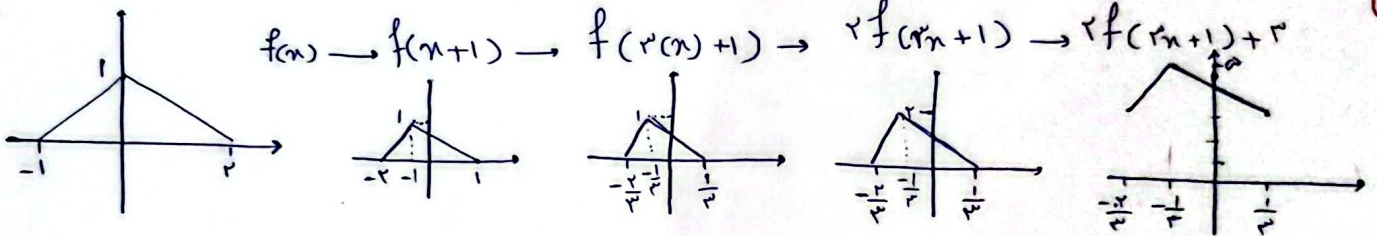
نویس

$$-2 \leq \frac{r_n + 2}{a} \leq 2 \rightarrow -10 \leq r_n + 2 \leq 20 \rightarrow -12 \leq r_n \leq 18 \rightarrow -2 \leq n \leq 2 \rightarrow D_f = [-2, 2] \quad (1)$$

$$-2 \leq x \leq 2 \rightarrow -9 \leq r_n \leq 9 \rightarrow -11 \leq r_n - 2 \leq 7 \rightarrow D_f = [-11, 7] \quad (2)$$

$$-1 \leq x \leq 2 \rightarrow -5 \leq r_n \leq 9 \rightarrow -2 \leq r_n + 1 \leq 10 \rightarrow -1 \leq \frac{r_n + 1}{r} \leq 10 \rightarrow D_f = [-1, 10] \quad (3)$$

$$-1 \leq 2 - \Delta n \leq 10 \rightarrow -3 \leq -\Delta n \leq 8 \rightarrow 3 \geq \Delta n \geq -8 \rightarrow \frac{r}{a} \geq n \geq -\frac{r}{a}$$



$$x = \frac{-b}{ra} \rightarrow \frac{\frac{r}{a} + \frac{r}{a}}{\frac{r}{a} + \frac{r}{a}} = \frac{r}{a} \quad y = \frac{\Delta}{ra} \cdot \frac{r}{a} \rightarrow \left(\frac{r}{a}, \frac{r}{a} \right) \xrightarrow{\text{میان اصل}} \left(\frac{r}{a}, \frac{r}{a} \right)$$

$$\begin{aligned} & \left(\frac{r}{a}, \frac{r}{a} \right) \\ & \frac{r}{a} \cdot \frac{r}{a} = \frac{r^2}{a^2} \\ & \omega(-1)t \\ & \omega t^2 - r \cdot t + r^2 = 0 \\ & (\omega t - 1)(\omega t + r) = 0 \\ & \omega t = \frac{1}{\omega} \quad t = \frac{1}{\omega} \end{aligned}$$

$$t = x - \frac{1}{a}$$

$$-\frac{1}{r} t^2 + \frac{r}{a} t + \frac{r^2}{a^2} = 0$$

$$t^2 + \frac{r}{a} t - \frac{r^2}{a^2} = 0$$

$$t = \frac{-\frac{r}{a} \pm \sqrt{\left(\frac{r}{a}\right)^2 + 4 \cdot \frac{r^2}{a^2}}}{2} = \frac{-\frac{r}{a} \pm \sqrt{\frac{r^2}{a^2} + \frac{4r^2}{a^2}}}{2} = \frac{-\frac{r}{a} \pm \sqrt{\frac{5r^2}{a^2}}}{2} = \frac{-\frac{r}{a} \pm \frac{r\sqrt{5}}{a}}{2}$$

$\frac{1}{a} + t = x$

$\left(\frac{1}{a} \right) \quad \left(\frac{1}{a} \right)$

$x = 1$
 $x = 2$

$$x_s = \frac{-1+r}{r} \cdot 1$$

$$y_s = r$$

$$y = 1 - r f(n+r)$$

$$r_{n+r} \leq 1 \rightarrow r_{n+2} = 1 \rightarrow n+2 = \frac{1}{r}$$

$$-r(r) + 1 = r \quad \alpha\beta = -\frac{1}{r} \alpha - r \cdot \frac{r}{r}$$

⑦

$$a \leq x-1 \leq \varepsilon \rightarrow a+1 \leq x \leq \varepsilon \rightarrow Df(n-1) = (a+1, \varepsilon]$$

$$-r \leq x < b-1 \rightarrow Dg(n+1) = [-r, b-1) \quad \text{استقرت الى } (a+1, \varepsilon] \cap [-r, b-1)$$

$$-r - \varepsilon = \boxed{-a}$$

$$a+1 = -r \rightarrow a = -r-1$$

$$b-1 = \varepsilon \rightarrow b = \varepsilon+1$$

⑧

$$Dy_1 = [-r, \varepsilon] \quad -r \leq x \leq \varepsilon \quad -\frac{r}{r} \leq \frac{x}{r} \leq \frac{\varepsilon}{r} \rightarrow -\frac{1}{r} \leq \frac{x}{r} + 1 \leq \frac{\varepsilon}{r} \rightarrow Df = [-\frac{1}{r}, \frac{\varepsilon}{r}]$$

$$Ry_2 = [-1, r] \rightarrow -1 \leq f(n) \leq r \rightarrow -r \leq f(n) - r \leq -1 \rightarrow 1 \leq |f(n) - r| \leq r$$

$$Rf = [\sqrt{r}, \sqrt{r}] \leftarrow \sqrt{r} \leq \sqrt{r} |f(n) - r| \leq \sqrt{r} \leftarrow r \leq r |f(n) - r| \leq r$$

$$f(n) = \left| \frac{n+1}{r_{n+1}} \right| \rightarrow \left| \frac{(n-r)+1}{r(n-r)+1} \right| + 1 = \left| \frac{n-1}{r_{n-r}} \right| + 1$$

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

⑩

$$\rightarrow \frac{n-1 + (n+1)(r_{n-r})}{r_{n-r}} < 0 \rightarrow \frac{r_{n-r}^2 - 1}{r_{n-r}} < 0 \rightarrow \frac{r(n^2 - r)}{r_{n-r}} < 0$$

$$\boxed{(-\infty, -\sqrt{r})} \leftarrow \frac{-\sqrt{r}}{-\sqrt{r}} + \frac{\sqrt{r}}{\sqrt{r}} + \frac{r}{r}$$

$$\left(\frac{r}{r} \right)$$