

$$-2 \leq \frac{3x+2}{5} \leq 5 \rightarrow -10 \leq 3x+2 \leq 25 \rightarrow -12 \leq 3x \leq 23 \rightarrow -4 \leq x \leq 7 \frac{2}{3}$$

پاسخ

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$$\begin{aligned} -2 &\rightarrow 3x-2-2 = -8 \\ 2 &\rightarrow 3x-2 = 4 \end{aligned}$$

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$$D_{f(x)} = [-8, 4]$$

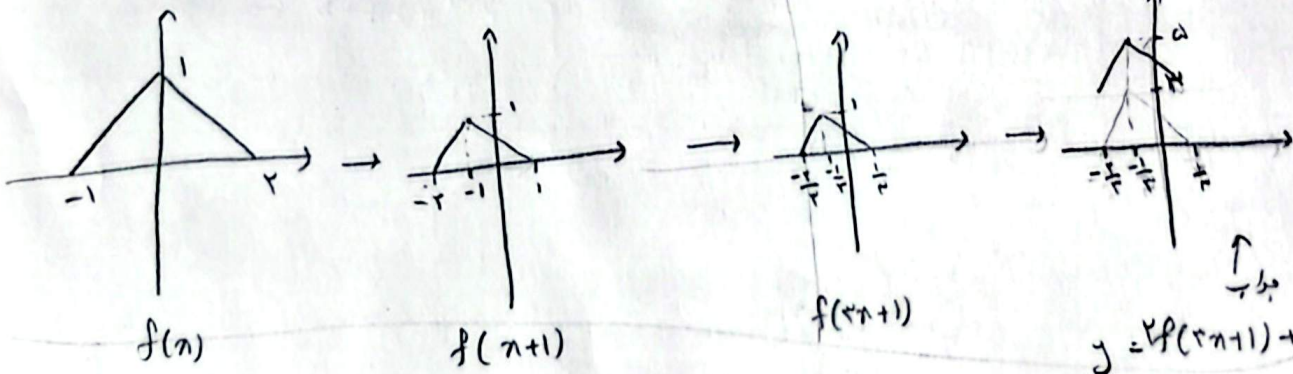
$$\begin{aligned} -1 &\rightarrow \frac{3x-1+1}{2} = -1 \\ 3 &\rightarrow \frac{3x+1}{2} = 5 \end{aligned}$$

$$D_{f(x)} = [-1, 5] \rightarrow -1 \leq x \leq 5$$

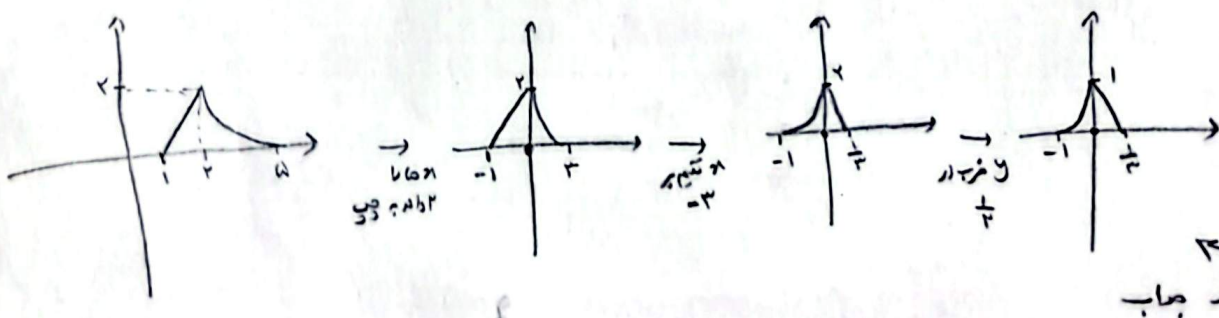
$$\begin{aligned} -1 \leq 2-4x \leq 5 &\rightarrow -3 \leq -4x \leq 3 \\ \rightarrow \frac{3}{4} \geq x \geq -\frac{3}{4} \end{aligned}$$

$$D_{f(2-4x)} = \left[-\frac{3}{4}, \frac{3}{4}\right]$$

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(۴)



(۵)

$$y = a(n-h) + k \rightarrow y = -\frac{1}{r}(n-r) + r$$

$$-\frac{1}{r}(n-r) + r = 0 \rightarrow \frac{1}{r}(n-r) = r \rightarrow (n-r) = r \rightarrow \begin{cases} n-r = r \rightarrow n = 2r \\ n-r = -r \rightarrow n = 0 \end{cases}$$

$$\begin{aligned} \omega_1(1, r) &\rightarrow 1-r = -1 \xrightarrow{\text{sub}} -\frac{1}{r} \\ &\rightarrow rx - r = -1 \xrightarrow{\text{sub}} -1 + 1 = -r \\ \omega_2(-\frac{1}{r}, -r) &\xrightarrow{\text{sub}} (x, y) \\ x \times y &= -\frac{1}{r} \times -r = \frac{r}{r} \end{aligned}$$

$$\begin{aligned} -1 \leq a+1 \leq b &\rightarrow -2 \leq n \leq b-1 \\ a \leq n-1 \leq c &\rightarrow a+1 \leq n \leq d \end{aligned} \Bigg\} \xrightarrow{\cap} D_y = (a+1, d] \cap [-2, b-1) = (-2, d)$$

$$\begin{aligned} a+1 = -2 &\rightarrow a = -3 \\ b-1 = d &\rightarrow b = d \end{aligned} \Bigg\} a-b = -3-d = -9$$

$$D_F = [-\frac{1}{r}, \frac{r}{r}] \quad R_F = [-1, 1]$$

$$[-1, 1] \xrightarrow{\text{sub}} [-2, c] \xrightarrow{\text{sub}} [-d, d] \rightarrow \text{if } |x(n) - r| \leq d \xrightarrow{\text{sub}} [0, \sqrt{d}]$$

$$D = [-\frac{1}{r}, \frac{r}{r}] \quad R = [0, \sqrt{d}]$$

$$\begin{aligned} f(n) &= \left| \frac{n+1}{r(n+1)} \right| \xrightarrow{\text{sub}} g(n) = \left| \frac{n-1}{r(n-1)} \right| + 1 \\ x + g(n) &\leq \rightarrow x+1 + \left| \frac{n-1}{r(n-1)} \right| \leq \\ &\rightarrow \left| \frac{n-1}{r(n-1)} \right| \leq -x-1 \end{aligned}$$

$$\begin{aligned} \frac{n-1}{r(n-1)} \leq -x-1 &\rightarrow \frac{r(n^2-2)}{r(n-1)} \leq 0 \quad \frac{-\sqrt{r} \quad \sqrt{r} \quad \frac{r}{r}}{-1 + \frac{r}{r} - \frac{r}{r} + \frac{r}{r}} \\ \frac{n-1}{r(n-1)} > x+1 &\rightarrow \frac{-n^2+n}{r(n-1)} = \frac{n(-n+1)}{r(n-1)} > 0 \end{aligned}$$

$$D_1 = (-\infty, -\sqrt{r}) \cup (\sqrt{r}, \frac{r}{r})$$

$$D_2 = (-\infty, 0) \cup (1, \frac{r}{r})$$

$$D_r \cap D_1 \cap D_2 = (-\infty, -\sqrt{r})$$