

مباحثی

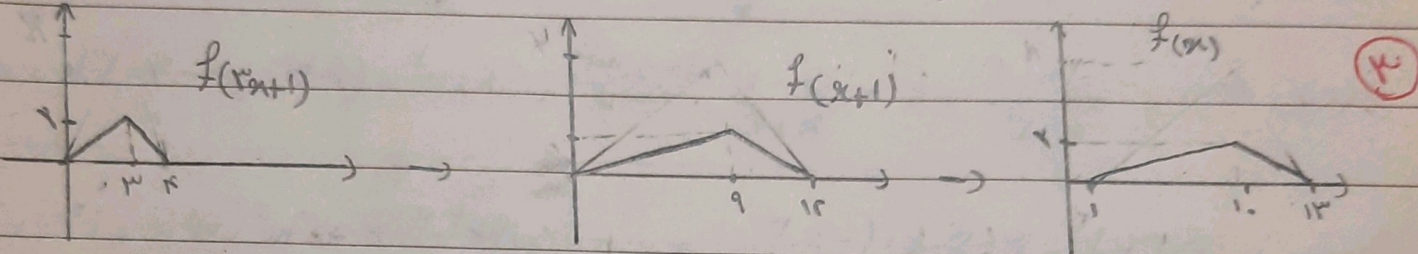
به نام آنکه (ع) را گفت آفت

نادره سیر - کنگه ۹

(۱) $-4 \leq x_{n-1} \leq 2 \rightarrow -2 \leq x_n \leq 4 \rightarrow -\frac{2}{3} \leq x_{n+1} \leq \frac{4}{3} \rightarrow D_{f(x)} = \left[-\frac{2}{3}, \frac{4}{3}\right]$ (اقل)

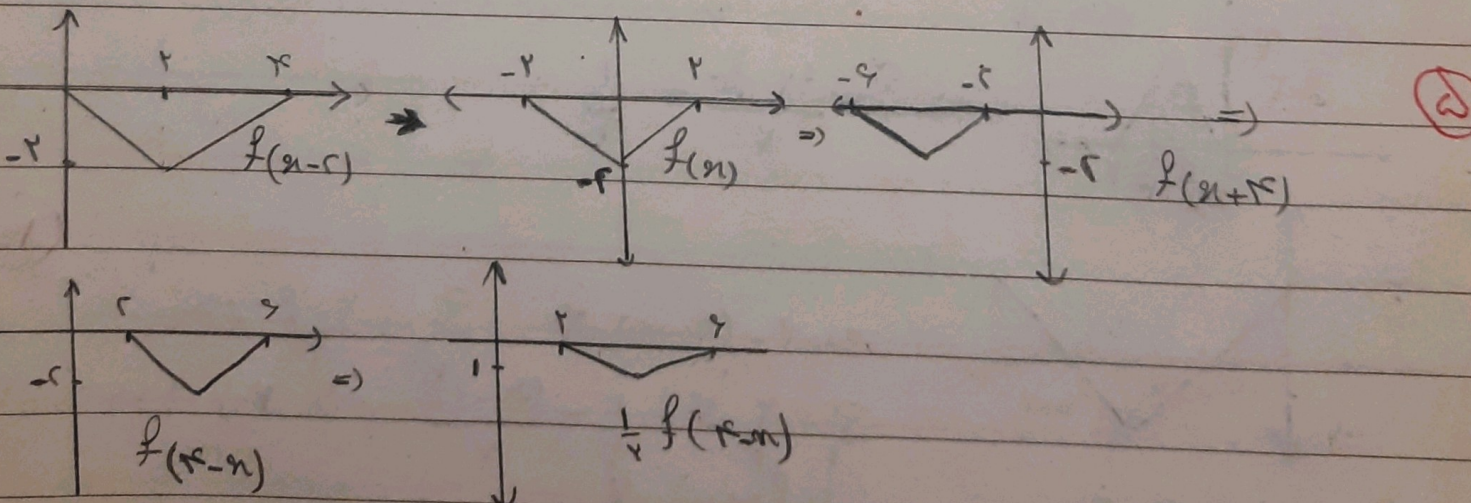
(ب) $-\frac{4}{3} \leq x_n \leq 2 \rightarrow -\frac{14}{3} \leq x_{n+1} \leq 4 \rightarrow -\frac{14}{3} \leq x_{n+2} \leq 4 \rightarrow D_{f(n)} = [-14, 4]$

(۲) $f(x-r) = (x-r) + \sqrt{(x-r)-r}$ $\xrightarrow{\text{قرینه نسبت}} x = y-r + \sqrt{y-r}$
 $\xrightarrow{\text{تغییر متغیر}} y = y-r + \sqrt{y-r} \rightarrow y = \sqrt{y-r} \rightarrow y^2 = y-r \rightarrow y = 1$



$S = \frac{r \times 1r}{r} = \frac{1r}{r}$

(۴) $\frac{x-a}{r} = 1 \rightarrow y_{A'} = y_A \rightarrow a + r f\left(\frac{x-a}{r}\right) = -3 \rightarrow a-r = -3 \rightarrow a = r$
 $\xrightarrow{r \rightarrow f(r) = -3}$



2 داده یعنی $f(x_{n-1})$ و $-r$ و $(x+r)$ $\geq 0 \rightarrow$

$\rightarrow \frac{-r}{1} + \frac{0}{1} - \frac{1}{1} + \frac{r}{1} = 0 \rightarrow D_g = [-r, 0] \cup [1, r]$

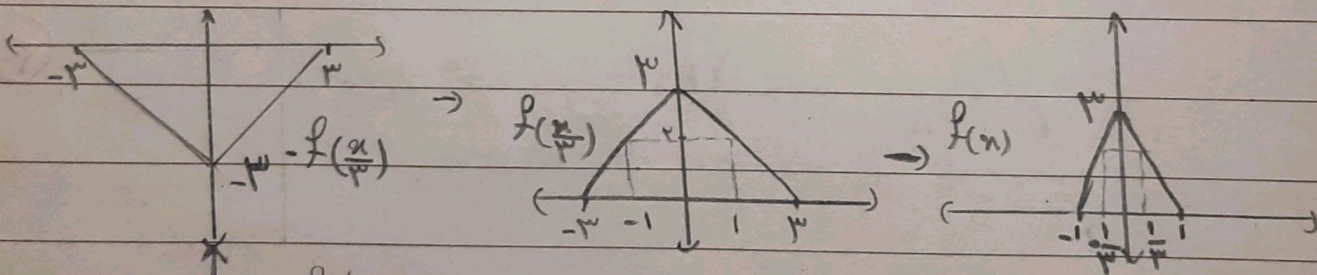
$g(x) = |2(x+k) - 2| + 1 - 2 = |2x + 2k - 2| - 1$ $\xrightarrow{\text{نمایان می شود}} f(0) = g(0)$

$|2k - 2| - 1 = |-2| + 1 = 2 \rightarrow |2k - 2| = 4 \rightarrow 2k - 2 = 4 \rightarrow k = \frac{6}{2} = 3$ ✓
 و $2k - 2 = -4 \rightarrow k = -1$ $\rightarrow k = -\frac{2}{2} = -1$ $\rightarrow$ $\frac{2}{2} = 1$

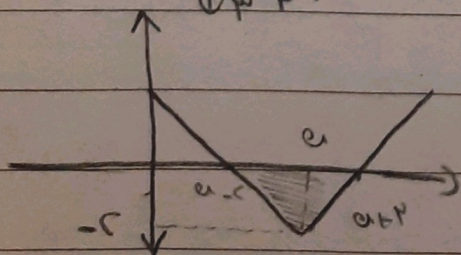
$\frac{2x-1}{x+1} \xrightarrow{\text{تقسیم}} \frac{-2x+1}{x+1} \xrightarrow{\text{دوباره 2 ضرب}} \frac{-\frac{2}{2}x+1}{\frac{2}{2}x+1} \xrightarrow{\text{ضرب در 2}} \frac{-x+1}{\frac{2}{2}x+1} + k = \frac{-x+2}{x+2} + k$

$g(x) = f(x) \rightarrow \frac{-x+2}{x+2} + k = \frac{2x-1}{x+1} \xrightarrow{x(x+1)(x+2)} (x-k)x^2 + (x-k)x - 2 - 2k = 0$

$\Delta \rightarrow (x-k)^2 - 2(x-k) - 2 - 2k = 0 \rightarrow 1x^2 + 1xk^2 - 2xk - 2k^2 + 2xk + 2 = 0$
 $\rightarrow x^2k^2 - 2xk + 2 = 0 \rightarrow k^2 - 2k + 2 = 0$



$\rightarrow S = \frac{1 \times \frac{2}{2}}{2} = \frac{1}{2}$



$f(x) = |x-2| - 2$

$a+r - (a-r) = 2 \rightarrow S = \frac{1 \times 2}{2} = 1$

$S = \frac{1}{2} \times 2 = \frac{1}{2} = \frac{(a-r)^2}{2} \rightarrow (a-r)^2 = 1 \rightarrow a = 3$
 $\rightarrow f(\frac{1}{2}) = \frac{1}{2}$