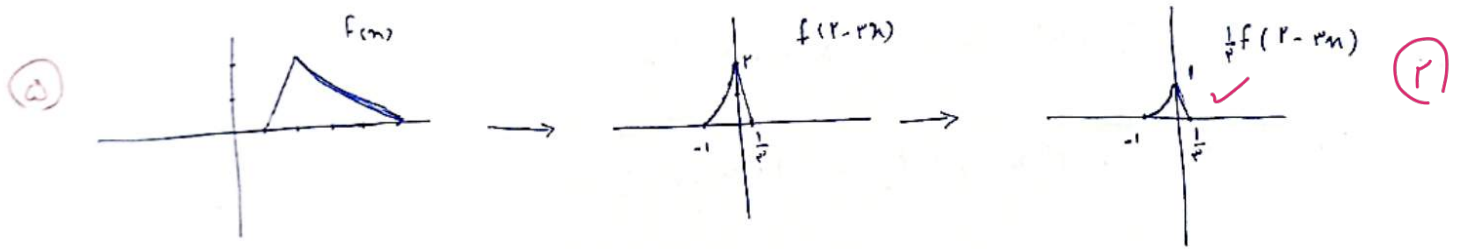
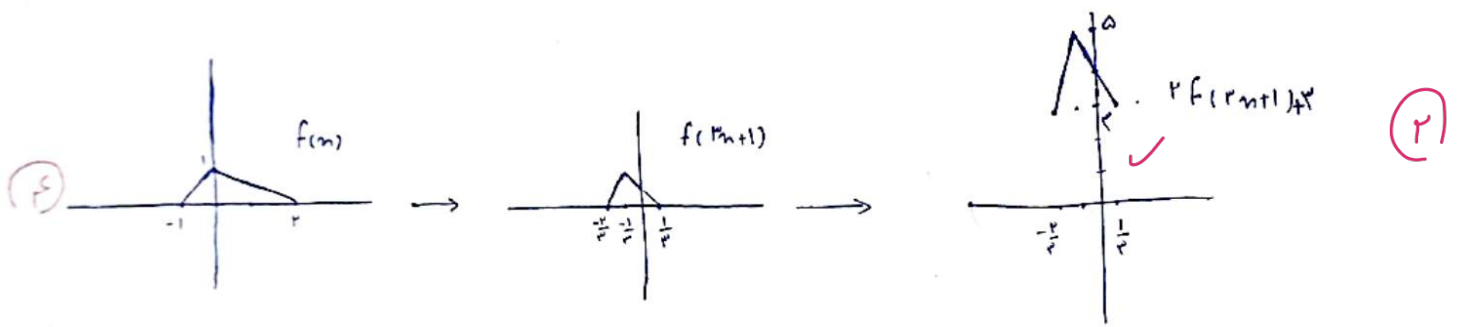


(1) $-r \leq n \leq r \rightarrow -r \leq \frac{r_{n+1}}{\Delta} \leq r \rightarrow -1 \leq r_{n+1} \leq r \rightarrow -1 \leq r_n \leq 1$ (2)
 $\downarrow$
 $-r \leq n \leq r$ ✓

(2) $-r \leq n \leq r \rightarrow -1 \leq r_{n+1} \leq r \rightarrow -1 \leq n \leq r$ ✓ (2)

(3) $-1 \leq n \leq 1 \rightarrow -1 \leq \frac{r_{n+1}}{\Delta} \leq 1 \rightarrow -1 \leq r - \Delta n \leq \frac{r}{\Delta} \rightarrow -r \leq -\Delta n \leq r \rightarrow -\frac{r}{\Delta} \leq n \leq \frac{r}{\Delta}$ (2)



(6) $\frac{0}{1}$

رأس: (h, k) $\xrightarrow{\text{معادلة خط}}$ $y = a(n-h)^2 + k = -\frac{1}{r}n^2 + \frac{r}{\Delta}n + 1 \rightarrow a = -\frac{1}{r}$

رأس: $(r, r) \rightarrow y = -\frac{1}{r}(n-r)^2 + r \xrightarrow{y=0} -\frac{1}{r}(n-r)^2 = -r \rightarrow \begin{cases} n = r \\ n = 1 \end{cases}$

(7) $\alpha \beta = (1, f) \rightarrow r_{n+1} = 1 \rightarrow n = \frac{1}{r} \rightarrow y = 1 - r \cdot f = -r \rightarrow \alpha \beta = \frac{r}{r}$ (2)

(8) $a < n \leq f \rightarrow a < n-1 \leq f \rightarrow a+1 < n \leq f \rightarrow a+1 = -r \rightarrow a = -r$
 $-1 \leq n < b \rightarrow -1 \leq n < b-1 \rightarrow b-1 = \Delta \rightarrow b = \Delta$ (2)
 $a \cdot b = -9$

(9)

$$y \sim f\left(\frac{n}{p} + 1\right) \rightarrow -r^m \leq n \leq \infty \rightarrow -\frac{1}{p} \leq \frac{n}{p} + 1 \leq \frac{1}{p} \rightarrow \Omega_{xy} = \left[-\frac{1}{p}, \frac{1}{p}\right]$$

(1)

$$R_{y_1} = [-1, 1] \rightarrow r f(n) = [-r, r] \rightarrow r f(n) - r = [-\delta, \delta] \rightarrow \sqrt{|[-\delta, \delta]|} = \boxed{[0, \sqrt{\delta}]}$$

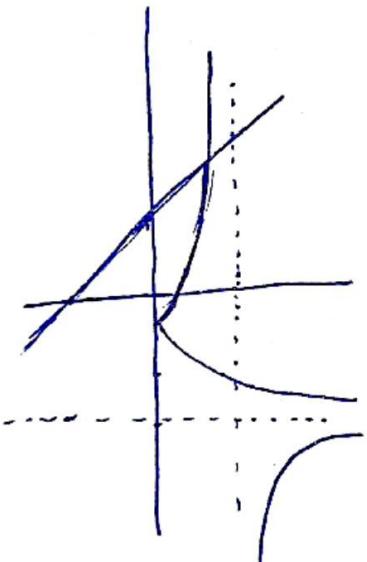
(10)

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

(15)

معدن آفر

$$\left| \frac{n-1}{r_{n-r}} \right| < -n-1$$



$$\frac{1-n}{r_{n-r}} = -n-1$$

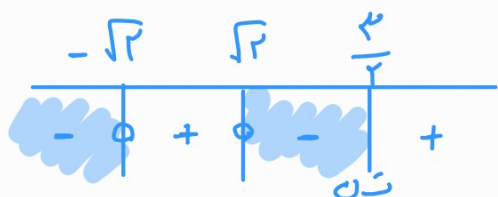
$$\hookrightarrow \frac{n-1}{r_{n-r}} = n+1 \rightarrow$$

$$g(x) = \left| \frac{(x-2)+1}{2(x-2)+1} \right| + 1 = \left| \frac{x-1}{2x-3} \right| + 1$$

$$x + g(x) < 0 \rightarrow \left| \frac{x-1}{2x-3} \right| < -1-x$$

از به قدر مطلق بزرگتر شده پس باید مثبت
باشد: $-1-x > 0 \rightarrow x < -1$

$$\xrightarrow{x < -1 \text{ قدر مطلق مثبت}} \frac{x-1}{2x-3} < -1-x \rightarrow \frac{2x^2-4}{2x-3} < 0 \rightarrow \frac{2(x-\sqrt{2})(x+\sqrt{2})}{2x-3} < 0$$



$$\xrightarrow{x < -1} x < -\sqrt{2} \rightarrow (-\infty, -\sqrt{2})$$