

دوازدهم فصل 3

۲۰

تکلیف شماره ۵

صلیحه کریمی

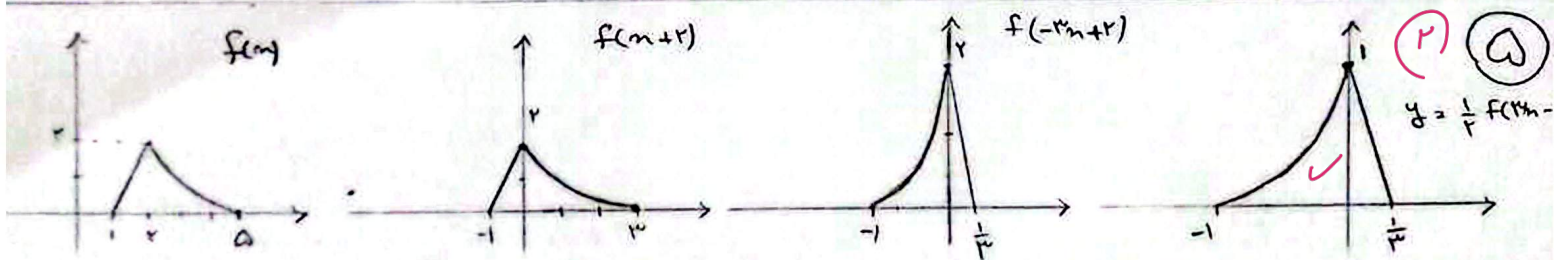
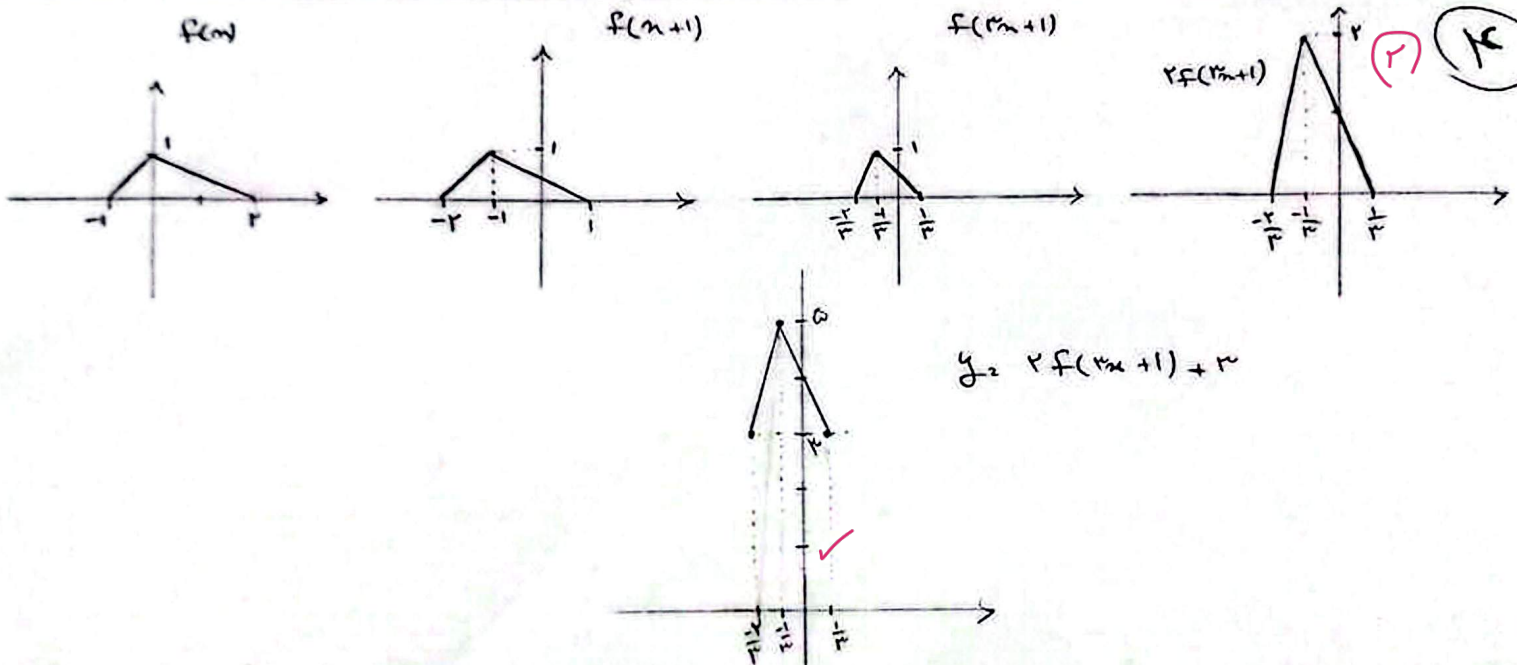
$$D_{f(n)} = [-r, r]$$

$$-r \leq \frac{r_{n+1}}{\omega} \leq r \rightarrow -1 \leq r_{n+1} \leq r \rightarrow -1 \leq r_{n+1} \leq 1 \rightarrow \boxed{-f(r_{n+1}) \leq y \leq f(r_{n+1})} \quad (1)$$

$$D_{f(r_{n+1})} = [-r, r] \rightarrow -1 \leq r_{n+1} \leq 1 \rightarrow \boxed{D_{f(n)} = [-1, 1]} \quad (2)$$

$$D_{f\left(\frac{r_{n+1}}{r}\right)} = [-1, 1] \rightarrow -1 \leq \frac{r_{n+1}}{r} \leq 1 \rightarrow -1 \leq r - \omega n \leq 1$$

$$-r \leq -\omega n \leq r \rightarrow -r \leq \omega n \leq r \rightarrow \boxed{\frac{-r}{\omega} \leq n \leq \frac{r}{\omega}} \quad (3)$$



$$y_r = \frac{1}{r} (n-r)^r + r = 0 \rightarrow (n-r)^r = -r \rightarrow n-r = \pm \sqrt[r]{r} \rightarrow \boxed{\frac{n-r}{r} = \pm \sqrt[r]{r}} \quad (4)$$

$$\frac{1}{p} + r = 1 \rightarrow m = \frac{1}{p} = \alpha$$

$$f(\frac{1}{p} + r) = r \rightarrow g = 1 - r(r) = -r = \beta$$

$$\left\{ \begin{array}{l} \alpha \beta = \frac{1}{p} (-r) = \frac{r}{p} \end{array} \right.$$

(r) (V)

$$D_f = (a, r]$$

$$D_g = [-1, b)$$

$$g = f(n-1) + g(n+1)$$

$$\left. \begin{array}{l} a(n-1) < r \rightarrow a+1 < n < \Delta \\ -1 < n+1 < b \rightarrow -r < n < b-1 \\ \text{نقطه اتصال} \rightarrow -r < n < \Delta \end{array} \right\}$$

$$a+1 = -r \rightarrow \boxed{a = -r}$$

$$b-1 = \Delta \rightarrow \boxed{b = \Delta}$$

$$a-b = -r - (\Delta) = \boxed{-9}$$

(r) (A)

$$g_r = \sqrt{|rf(m) - r|}$$

$$D_{g_r} \rightarrow |rf(m) - r| > 0$$

مقادیر مثبت

$$D_{f(m)} \rightarrow \left[\frac{r}{p} + 1, \frac{\Delta}{p} + 1 \right] = \left[\frac{1}{p}, \frac{r}{p} \right]$$

$$R_{g_r} \rightarrow -1 < f(m) < r \rightarrow -r < rf(m) < r \rightarrow -\Delta < rf(m) - r < 1 \rightarrow 0 < |rf(m) - r| < \Delta$$

$$0 < \sqrt{|rf(m) - r|} < \sqrt{\Delta}$$

$$\left\{ \begin{array}{l} D_{g_r} = \left[-\frac{1}{p}, \frac{r}{p} \right] \\ R_{g_r} = [0, \sqrt{\Delta}] \end{array} \right.$$

(r) (9)

10
(2)

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

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

$$\rightarrow \left| \frac{m-1}{2m-3} \right| < -n-1 \rightarrow -n-1 > 0 \quad \downarrow \quad n < -1$$

همواره منفی است

1) $\leftarrow$ دایره بازه جواب داخل قد، مطلق منفی است

$$\frac{1-n}{2-2n} < -n-1 \rightarrow 1-n < (-n-1)(2n+3)$$

$$2n^2 - n - 3 > 1 - n \rightarrow 2n^2 > 4 \rightarrow$$

$$\textcircled{1} \cap \textcircled{2} \rightarrow$$

$$n^2 > 2 \rightarrow n > \sqrt{2} \text{ یا } n < -\sqrt{2} \quad \textcircled{2}$$

$$\boxed{n \in (-\infty, -\sqrt{2}) \cup (\sqrt{2}, \infty)}$$