

هدف تجزیه و تحلیل

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

$$-1 \leq \frac{r_{n+1}}{\omega} \leq 1 \quad -r \leq r_n \leq r \rightarrow -r \leq n \leq r \quad [-r, r]$$

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

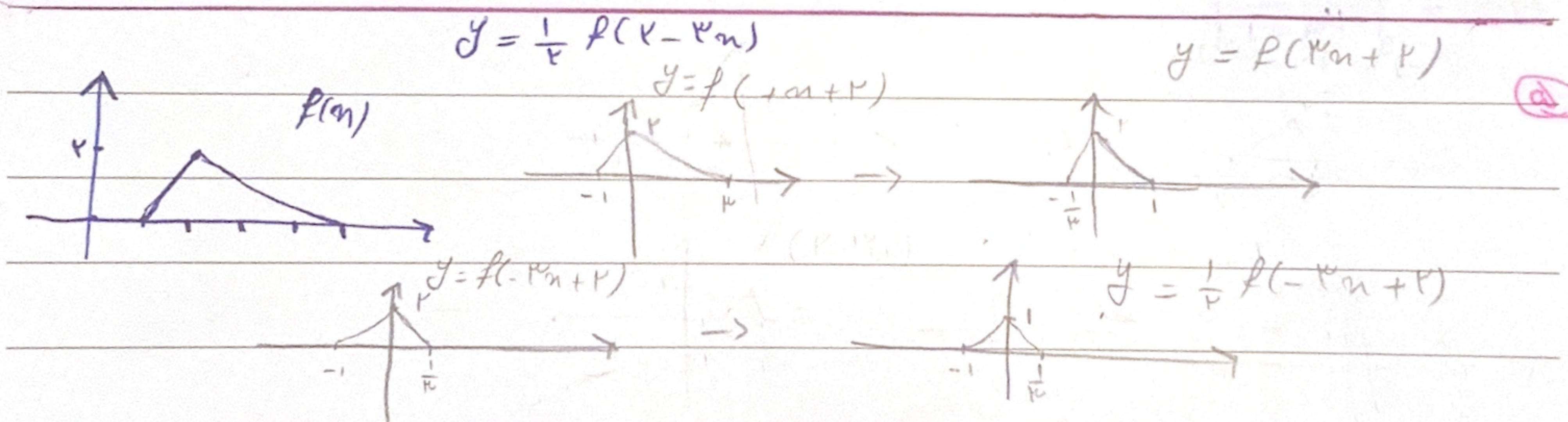
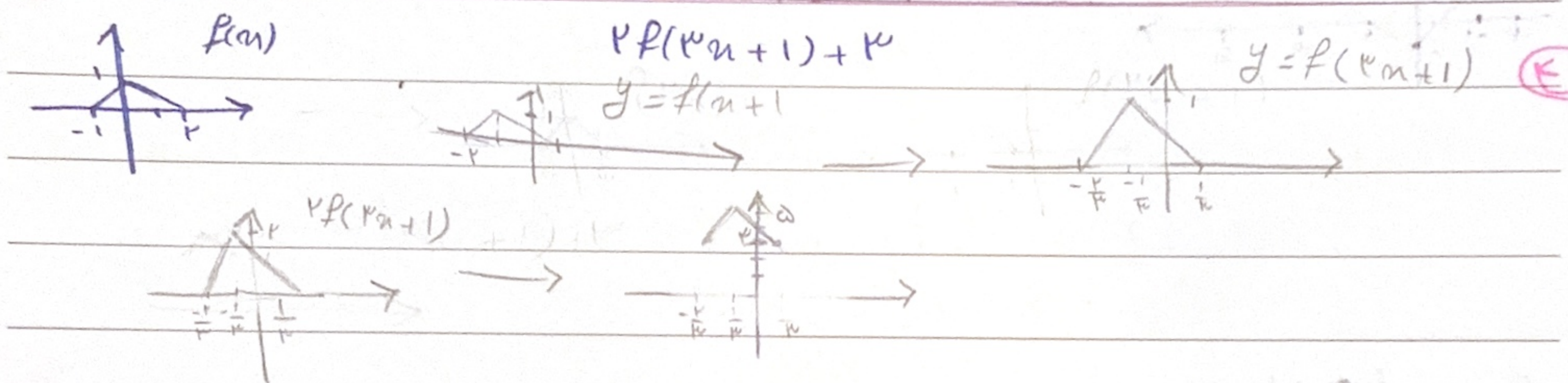
$$-r \leq r_{n+1} \leq r \quad -1 \leq r_{n+1} - r \leq r \quad [-1, r]$$

$$f\left(\frac{r_{n+1}}{r}\right) \rightarrow D = [-1, r] \quad f(r - \omega n) \rightarrow D = \emptyset \quad (3)$$

$$-1 \leq n \leq r \quad -r \leq r_{n+1} \leq r \quad -r \leq r_{n+1} - r \leq r \quad -1 \leq \frac{r_{n+1}}{r} \leq 1$$

$$-1 \leq r - \omega n \leq r \quad -r \leq r - \omega n \leq r \quad -\frac{r}{\omega} \leq -n \leq \frac{r}{\omega} \quad \frac{r}{\omega} \geq n \geq -\frac{r}{\omega}$$

$$\left[-\frac{r}{\omega}, \frac{r}{\omega}\right]$$

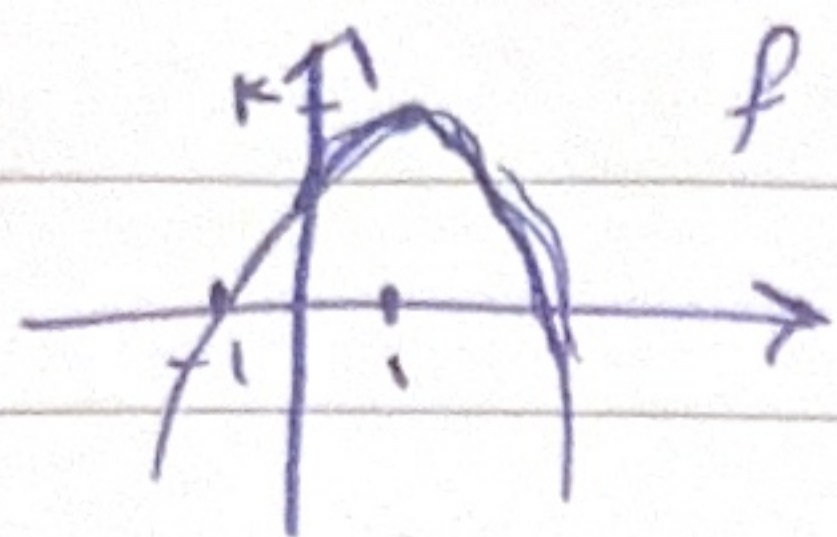


$$y = -\frac{1}{r} n^r + \frac{r}{\omega} n + 1 \xrightarrow{\text{دایره}} S(r, r) \quad \text{interpolated piecewise linear} \quad (4)$$

$$y = -\frac{1}{r} (n - r)^r + r \quad -\frac{1}{r} \leq (n - r)^r \leq 1$$

$$-\frac{1}{r} (n - r)^r + r = 0 \quad (n - r)^r = r \quad n - r = \pm r$$

$$n = r \quad \text{or} \quad n = 1$$



$$y = 1 - r f(\mu n + r) \rightarrow S = (\alpha, \beta) \quad (V)$$

$$n = -\frac{1}{\mu}$$

$$(-\frac{1}{\mu}, -V)$$

$$y = 1 - r f(\frac{r}{-1}) = -V$$

$$\alpha \beta = -\frac{V}{\mu}$$

$$D_f = [a, r]$$

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

$$a - b = ?$$

$$y = f(n-1) + g(n+1) \rightarrow D = (-r, a)$$

$$a < n-1 \leq r$$

$$a+1 < n \leq a$$

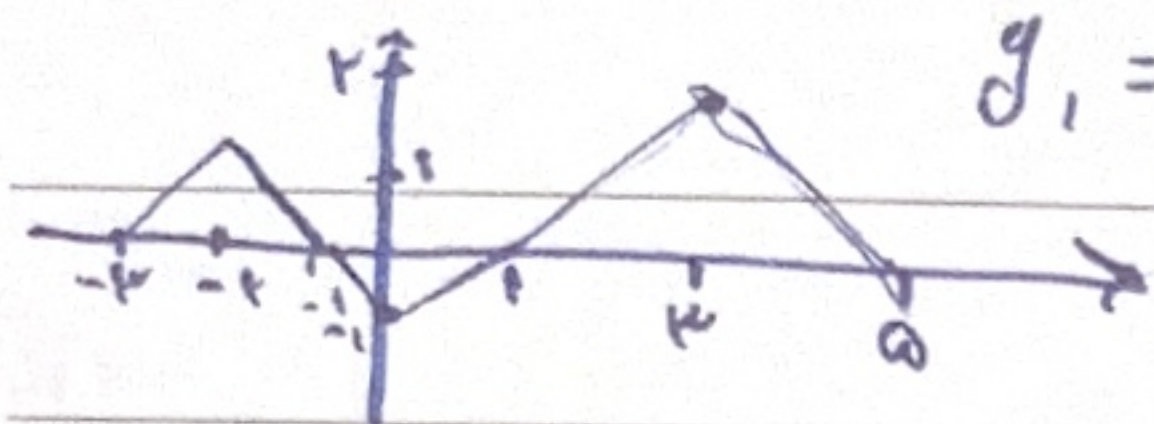
$$-1 \leq n+1 < b$$

$$-r \leq n < b-1$$

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

$$-r - r = -9$$

$$b-1 = a \rightarrow b = 9$$



$$g_1 = f(\frac{n}{r} + 1)$$

$$y_r = \sqrt{|r f(n) - \mu|}$$

$$R, D?$$

$$-r \leq n \leq a$$

$$-\frac{r}{r} \leq \frac{n}{r} \leq \frac{a}{r}$$

$$-\frac{1}{r} \leq \frac{n}{r} + 1 \leq \frac{V}{r}$$

$$-1 \leq f(n) \leq r$$

$$-r \leq r f(n) \leq r$$

$$-a \leq r f(n) - \mu \leq 1$$

$$0 \leq |r f(n) - \mu| \leq a$$

$$D_{g_r} = [-\frac{1}{r}, \frac{V}{r}]$$

$$0 \leq \sqrt{|r f(n) - \mu|} \leq \sqrt{a}$$

$$R_{g_r} = [0, \sqrt{a}]$$

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

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

$$g(n) = \left| \frac{n-1}{r n - \mu} \right| + 1$$

$$n + \left| \frac{n-1}{r n - \mu} \right| + 1 < 0$$

$$\frac{n}{r} > \frac{\mu}{r} \rightarrow n + \frac{n-1}{r n - \mu} + 1 < 0$$

$$\frac{r n^2 - \mu n + n - 1 + r n - \mu}{r n - \mu} = \frac{r n^2 - \mu}{r n - \mu}$$

$$\pm \sqrt{r}$$

$$\frac{r n^2 - \mu}{r n - \mu}$$

$$\frac{-\sqrt{r} + \sqrt{r}}{-\phi + \phi} = \frac{\mu}{\phi} + \alpha$$

$$1 \leq n \leq \frac{\mu}{r}$$

$$n + \frac{n-1}{r n - \mu} + 1 < 0$$

$$\frac{r n^2 + r n - n + 1 + r n + \mu}{r n + \mu}$$

$$\frac{r n^2 + r n + \mu}{r n + \mu} > 0$$

$$\frac{r n^2 + r n + \mu}{r n + \mu} \rightarrow -\frac{\mu}{r}$$

$$\frac{-\mu}{r} + \alpha$$

$$n < 1$$

$$n + \frac{n-1}{r n - \mu} + 1 < 0$$

$$\frac{r n^2 - \mu n + n - 1 + r n - \mu}{r n - \mu} = \frac{r n^2 - \mu}{r n - \mu} < 0$$

$$\frac{-\sqrt{r} + \sqrt{r}}{-\phi + \phi} = \frac{\mu}{\phi} + \alpha$$

$$(-\infty, -\sqrt{r})$$