

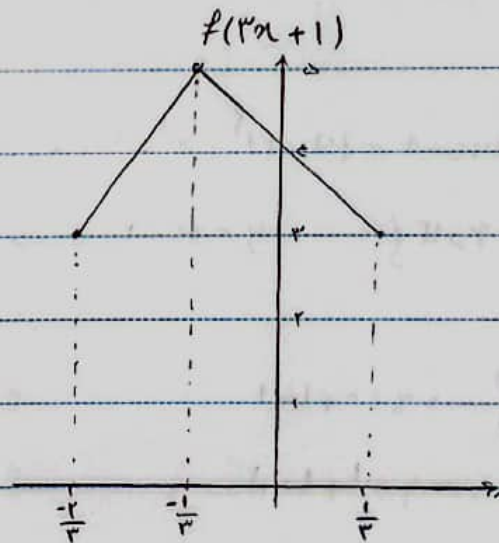
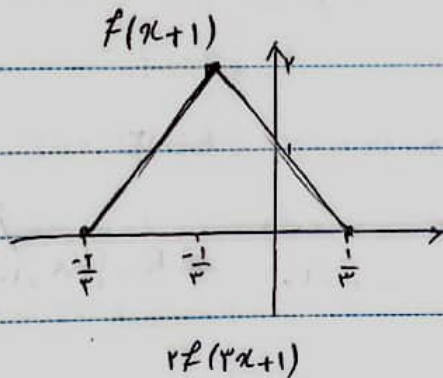
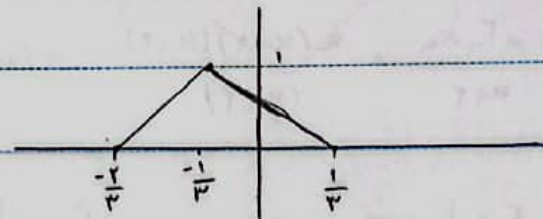
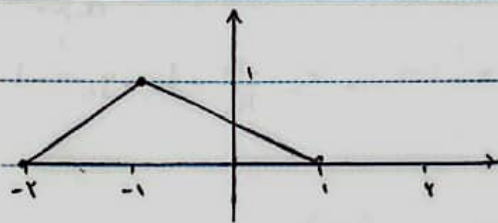
$$-2 \leq \frac{3x+2}{\omega} \leq 4 \rightarrow -10 \leq 3x+2 \leq 20 \rightarrow -12 \leq 3x \leq 18 \rightarrow -4 \leq x \leq 6$$

$$\Rightarrow D_{f\left(\frac{3x+2}{\omega}\right)} = [-4, 6]$$

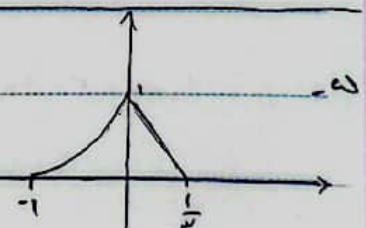
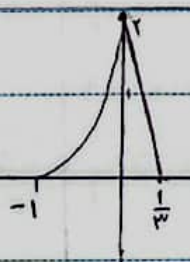
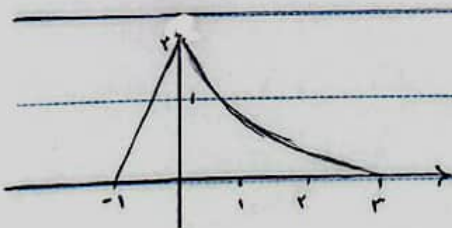
$$-2 \leq x \leq 3 \rightarrow -6 \leq 3x \leq 9 \rightarrow -1 \leq 3x-2 \leq 5 \rightarrow D_{f(n)} = [-1, 5]$$

$$-1 \leq x \leq 2 \rightarrow -3 \leq 3x \leq 6 \rightarrow -2 \leq 3x+1 \leq 10 \rightarrow -1 \leq \frac{3x+1}{r} \leq 4 \rightarrow f(x) \text{ is } 3$$

$$\Rightarrow -1 \leq 1-\omega x \leq 4 \rightarrow -3 \leq -\omega x \leq 3 \rightarrow \frac{3}{\omega} \geq x \geq \frac{-3}{\omega} \rightarrow D_{f(1-\omega x)} = \left(\frac{-3}{\omega}, \frac{3}{\omega}\right]$$



$$rf(3x+1)+3$$



$$f(x+r)$$

$$f(-3x+r)$$

$$\frac{1}{r} f(-3x+r)$$

$$y = a(x-h)^2 + k, (4, 3) \Rightarrow y = -\frac{1}{3}(x-4)^2 + 3$$

$$\Rightarrow -\frac{1}{3}(x-4)^2 + 3 = 0 \Rightarrow (x-4)^2 = 9 \rightarrow \begin{cases} x-4 = 3 \rightarrow x = 7 \\ x-4 = -3 \rightarrow x = 1 \end{cases}$$

نسبت

چون قوی تابع اولیه مقدار α را داریم می توانیم با استاندارد از پاس جدول ضابطه تابع جدید رو بنویسیم و ریشه هارا می

$$f(1) = 4 \rightarrow 2n + 2 = 1 \rightarrow 2n = -1 \rightarrow n = -\frac{1}{2}$$

$$y = 1 - 2f(1) = 1 - 2(4) = -7 \rightarrow A = \left(-\frac{1}{2}, -7\right) \rightarrow \alpha = -\frac{1}{2}, \beta = -7$$

$$\Rightarrow \alpha \cdot \beta = -\frac{1}{2} \times -7 = \frac{7}{2}$$

$$D_{f(n)} = (a, 4] \rightarrow D_{f(n-1)} = (a+1, 5]$$

$$D_{g(n)} = [-1, b) \rightarrow D_{g(n+1)} = [-2, b-1)$$

$$\Rightarrow (a+1, 5] \cap [-2, b-1) = (-2, 5) \rightarrow \begin{cases} a+1 = -2 \rightarrow a = -3 \\ b-1 = 5 \rightarrow b = 6 \end{cases}$$

$$a - b = -3 - 6 = -9$$

$$-3 \leq x \leq 5 \rightarrow -\frac{3}{2} \leq \frac{x}{2} \leq \frac{5}{2} \rightarrow -\frac{1}{2} \leq \frac{x}{2} + 1 \leq \frac{7}{2} \rightarrow D = \left[-\frac{1}{2}, \frac{7}{2}\right]$$

$$-1 \leq y \leq 2 \rightarrow -2 \leq 2y \leq 4 \rightarrow -5 \leq 2y - 3 \leq 1 \rightarrow 0 \leq |2y - 3| \leq 5$$

$$\rightarrow 0 \leq \sqrt{|2y - 3|} \leq \sqrt{5} \rightarrow R = [0, \sqrt{5}]$$

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

$$x+1 + \underbrace{\left| \frac{x-1}{2n-3} \right|}_{\text{همیشه نامنفی}} < 0$$

MR

$$\rightarrow x+1 < 0 \rightarrow x < -1 \rightarrow \frac{x-1}{2n-3} > 0 \rightarrow \text{می توانیم قیود مطلق را برداریم}$$

