

$$-2 \leq x \leq 4$$

$$-4 \leq 3x+2 \leq 14$$

$$-\frac{4}{3} \leq \frac{3x+2}{3} \leq \frac{14}{3}$$

$$D_f = \left[-\frac{4}{3}, \frac{14}{3}\right]$$

$$f(3x-2) \begin{cases} x=-1 \rightarrow f(-1) \\ x=7 \rightarrow f(7) \end{cases}$$

$$[-2, 3]$$

$$D_f = [-1, 7]$$

$$f\left(\frac{3x+1}{2}\right) \begin{cases} x=-1 \rightarrow f(0) \\ x=3 \rightarrow f(5) \end{cases}$$

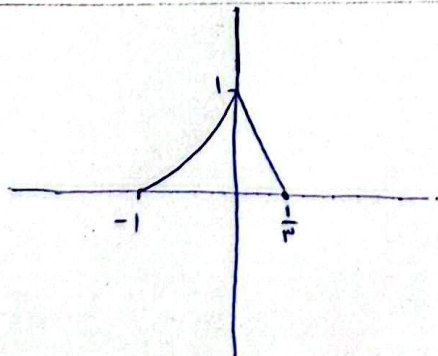
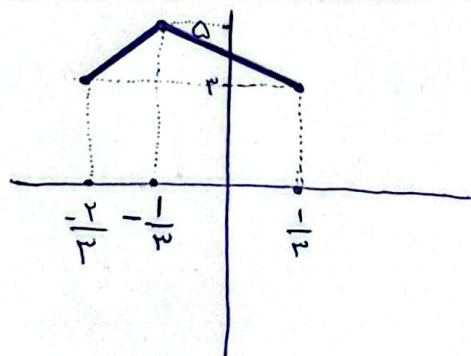
$$D_{f(x)} = [0, 5]$$

$$0 \leq 2-\Delta x < \Delta$$

$$-2 \leq -\Delta x < 3$$

$$\frac{2}{\Delta} \geq x > -\frac{3}{\Delta}$$

$$D_{f(2-\Delta x)} = \left[-\frac{3}{\Delta}, \frac{2}{\Delta}\right]$$



$$y = \left(-\frac{1}{x}\right)(x-4)^2 - 3$$

$$\begin{aligned} -\frac{1}{x}(x-4)^2 - 3 &= 0 \\ +6(x-4)^2 &= 9 \\ |x-4| &= 3 \\ x &= 7, 1 \end{aligned}$$

$$3x + y = 1$$

$$\alpha = x = -\frac{1}{3}$$

$$f(1) = 4$$

$$\beta = 1 - 2f(1) = -7$$

$$\alpha\beta = \left(-\frac{1}{3}\right)(-7) = \frac{7}{3} \checkmark$$

$$Dg_{(n+1)} = [-2, b-1)$$

$$Df_{(n+1)} = [a+1, \Delta]$$

$$a-b = -3-4 = -7$$

$$[-2, b-1) \cap (a+1, \Delta] = \overset{(-2, \Delta)}{\uparrow} [-2, \Delta]$$

$$\begin{aligned} b-1 &= \Delta & a+1 &= -2 \\ b &= 4 & a &= -3 \end{aligned}$$

$$R_{y_1} = [-1, 2]$$

$$\sqrt{|2(-1) - 3|} = \sqrt{5}$$

$$\sqrt{|2(1, \Delta) - 3|} = 0$$

$$R_{y_1} = [0, \sqrt{5}]$$

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

$$x + \left| \frac{x-1}{x-3} \right| + 1 < 0$$

$$\text{منه هو ارجو } \left| \frac{x-1}{x-3} \right| < -(x+1) \Rightarrow x \leq -1$$

$$\frac{x-1}{x-3} < -x-1$$

$$\frac{x-1}{x-3} + x+1 < 0 \quad x < -\sqrt{2} \checkmark$$

