

۱۹, ۲۵

$$D_{f(x)} = [-2, 4]$$

(۲)

(۱)

$$D_{f\left(\frac{3x+2}{2}\right)} \rightarrow -2 \leq \frac{3x+2}{2} \leq 4 \rightarrow -10 \leq 3x+2 \leq 20$$

$$\begin{aligned} -12 &\leq 3x \leq 18 \\ -4 &\leq x \leq 6 \end{aligned}$$

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

$$D_{f(3x-2)} = [-2, 3]$$

(۲)

$$D_{f(x)} = ? \rightarrow \begin{aligned} -2 &\leq x \leq 3 \\ 4 &\leq 4x \leq 9 \\ -1 &\leq 3x-2 \leq 1 \end{aligned}$$

$$[-1, 1] \cup [4, 9] = D_{f(x)}$$

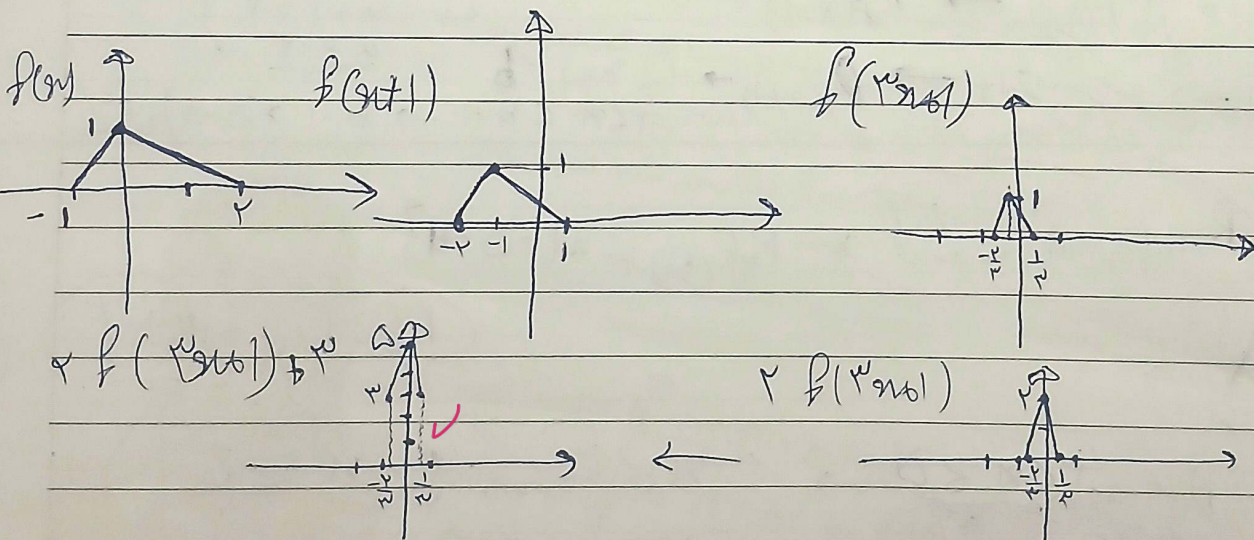
$$D_{f\left(\frac{3x+1}{2}\right)} = [-1, 3]$$

صحنی آخر

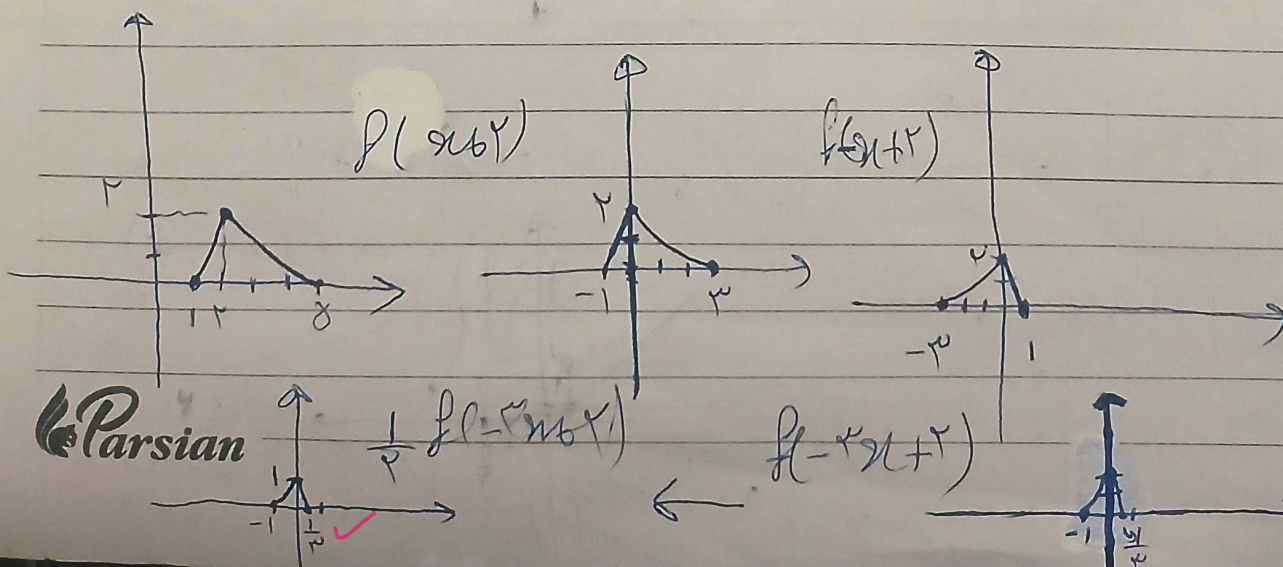
$$D_{f(2-3x)} = ?$$

$$\begin{aligned} -1 &\leq x < 3 \\ -3 &\leq 3x < 9 \\ -2 &\leq 3x+1 < 10 \end{aligned}$$

$$\begin{aligned} -1 &\leq 2-3x < 3 \\ -3 &\leq -3x < 1 \\ 1 &\leq x < 2 \end{aligned}$$



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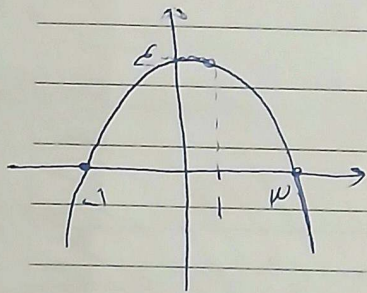


(۲)

در این سوال حول نکته استنباط یا انقضای عددی و افتق در نتیجه هر اتفاق اینها ضرب x^2 ها از $\frac{1}{x}$ است و حول جنبه از آن سرشته بهتر است آن فرم $2a(x-h)^2+k$ استفاده کرد و این هم نشی که قدرت انتقال یافته است.

$$y^2 - \frac{1}{x}(x-3)^2 + 3 \rightarrow -\frac{1}{x}x^2 + \frac{4}{x}x - \frac{14}{x} + 3 = 0$$

$$-\frac{1}{x}x^2 + \frac{4}{x}x - \frac{14}{x} + 3 = 0 \rightarrow a+b+c=0 \rightarrow x^2+14x-42=0$$



عوض $\rightarrow (1, -1)$

$$3x+2=1$$

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

$$y^2 \leq 4 \rightarrow (2, 2) + 1 = 3$$

$$\left(-\frac{1}{x}, \frac{1}{x}\right)$$

$$Df_{(a,b)} = (a, b) \text{ و } Dg_{(a,b)} = (-1, b)$$

$$y = f(x-1) + g(x+1) \rightarrow Df_{(x-1)} = a < x-1 < b \rightarrow a+1 < x < b+1$$

$$(-2, 4) \rightarrow Dg_{(x+1)} = -1 \leq x+1 \leq b \rightarrow -2 \leq x \leq b-1 \rightarrow b-1 \geq 2 \rightarrow b \geq 4$$

$$R_{|f(x)+g|} = [-2, 4] \leftarrow R_{f(x)+g} = [-2, 4]$$

$$Df = [-1, 2]$$

$$Df = [-2, 4] \rightarrow -2 \leq x \leq 4 \rightarrow -\frac{2}{x} \leq \frac{4}{x} \leq \frac{4}{x}$$

$$Rf = [-1, 2] \rightarrow -1 \leq x \leq 2 \rightarrow -2 \leq y \leq 4 \rightarrow -2 \leq y \leq 4 \rightarrow b+1 \leq \frac{4}{x} + 1 \leq \frac{4}{x} + 1$$

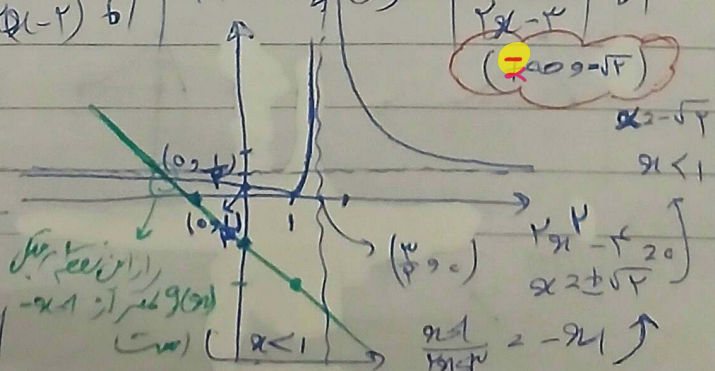
$$f(x) = \frac{|x+1|}{2x+1}$$

$$g(x) = \frac{|x-1|}{2x-1}$$

$$\frac{|x-1|}{2x-1} + 1 < x$$

$$\frac{|x-1|}{2x-1} + 1 < x$$

$$\frac{|x-1|}{2x-1} < x-1$$



$$Dg = [-1, r) \rightarrow -1 \leq n < r \rightarrow -1 \leq \frac{r_{n+1}}{r} < \Delta \Rightarrow D_f = [-1, \Delta)$$

-r

$$-1 \leq r - \Delta n < \Delta \rightarrow -\frac{r}{\Delta} \leq n \leq \frac{r}{\Delta} \Rightarrow D_{f(r-\Delta n)} = \left(-\frac{r}{\Delta}, \frac{r}{\Delta}\right]$$

$$D_{y_1} = [-r, \Delta] \rightarrow -r \leq n \leq \Delta \rightarrow -\frac{1}{r} \leq \frac{n}{r} + 1 \leq \frac{\Delta}{r} \Rightarrow D_f = \left[-\frac{1}{r}, \frac{\Delta}{r}\right]$$

-9

$$R_{y_1} = [-1, r] \rightarrow -1 \leq f \leq r \rightarrow -\Delta \leq rf - r \leq 1 \rightarrow 0 \leq |rf - r| \leq \Delta$$

$$0 \leq \sqrt{|rf - r|} \leq \sqrt{\Delta} \Rightarrow R_f = [0, \sqrt{\Delta}]$$