

$$-2 \leq \frac{3x+2}{5} \leq 5 \rightarrow -10 \leq 3x+2 \leq 25 \rightarrow -12 \leq 3x \leq 23 \rightarrow -4 \leq x \leq 7 \frac{2}{3}$$

پاسخ ✓

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$$\begin{aligned} -2 &\rightarrow 3x-2-2 = -8 \\ 2 &\rightarrow 3x-2 = 4 \end{aligned}$$

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$$D_{f(x)} = [-8, 4] \checkmark$$

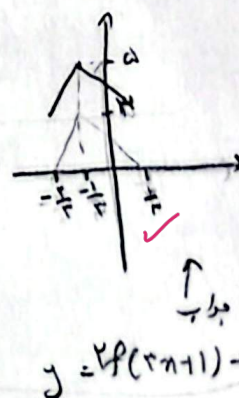
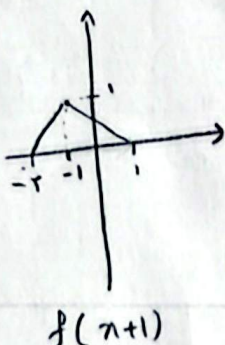
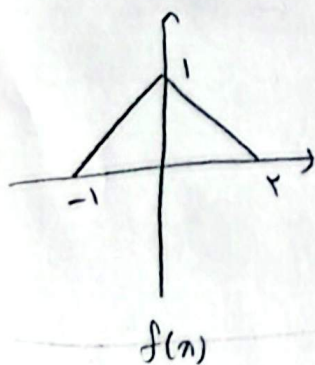
$$\begin{aligned} -1 &\rightarrow \frac{3x-1+1}{2} = -1 \\ 2 &\rightarrow \frac{3x+1}{2} = 5 \end{aligned}$$

$$D_{f(x)} = [-1, 5] \rightarrow -1 \leq x \leq 5$$

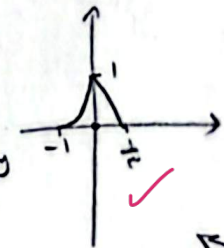
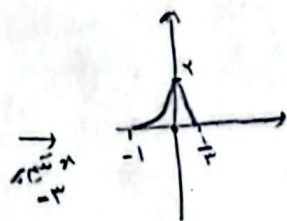
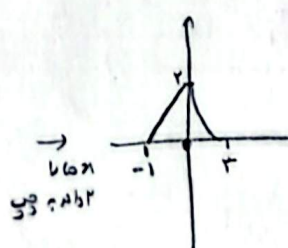
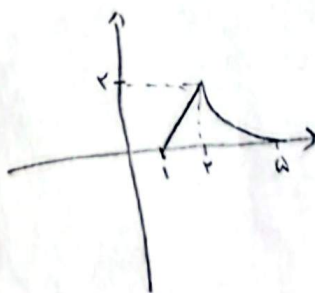
$$\begin{aligned} -1 &\rightarrow 2-4x \leq 5 \rightarrow -3 \leq -4x \leq 3 \\ &\rightarrow \frac{3}{4} \geq x \geq -\frac{3}{4} \end{aligned}$$

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

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$$y = a(n-h) + k \rightarrow y = -\frac{1}{r}(n-r) + r$$

$$-\frac{1}{r}(n-r) + r = 0 \rightarrow \frac{1}{r}(n-r) = r \rightarrow (n-r) = r \rightarrow \begin{cases} n-r = r \rightarrow n = 2r \\ n-r = -r \rightarrow n = 0 \end{cases}$$

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$$\begin{aligned} \text{مثال } (1, r) &\rightarrow 1-r = -1 \xrightarrow{\text{نقل}} -\frac{1}{r} \\ &\rightarrow rx - r = -1 \xrightarrow{\text{نقل}} -1 + 1 = -r \end{aligned}$$

$$\text{مثال } (-\frac{1}{r}, -r) \rightarrow (x, y)$$

$$x \times y = -\frac{1}{r}x - r = -\frac{1}{r}$$

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$$\left. \begin{aligned} -1 < a+1 < b &\rightarrow -2 < a < b-1 \\ a < n-1 < c &\rightarrow a+1 < n < c \end{aligned} \right\} \xrightarrow{\cap} D_y = (a+1, d] \cap [-2, b-1) = (-2, d)$$

$$\left. \begin{aligned} a+1 &= -2 \rightarrow a = -3 \\ b-1 &= d \rightarrow b = d \end{aligned} \right\} a-b = -3-d = -9$$

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$$D_F = [-\frac{1}{r}, \frac{1}{r}] \quad R_F = [-1, 1]$$

$$[-1, 1] \xrightarrow{f(x)} [-2, 2] \xrightarrow{-r} [-d, d] \rightarrow \text{مثال } |f(x) - r| < d \xrightarrow{\text{نقل}} [0, \frac{1}{r}]$$

$$D = [-\frac{1}{r}, \frac{1}{r}] \quad R = [0, \frac{1}{r}]$$

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$$f(x) = \left| \frac{x+1}{x-1} \right| \xrightarrow{\text{نقل}} g(x) = \left| \frac{x-1}{x-1} \right| + 1$$

$$x + g(x) < 0 \rightarrow x+1 + \left| \frac{x-1}{x-1} \right| < 0$$

$$\rightarrow \left| \frac{x-1}{x-1} \right| < -x-1 \rightarrow \begin{cases} -x-1 > \frac{x-1}{x-1} \\ -x-1 < \frac{x-1}{x-1} \end{cases}$$

$$\frac{x-1}{x-1} < -x-1 \rightarrow \frac{x(x-2)}{x-1} < 0 \quad \frac{-5r \quad 5r \quad \frac{1}{r}}{-1 + \frac{1}{r} - \frac{1}{r} + \frac{1}{r}}$$

$$D_1 = (-\infty, -\frac{1}{r}) \cup (\frac{1}{r}, \infty)$$

$$\frac{x-1}{x-1} > -x-1 \rightarrow \frac{-x^2+x}{x-1} = \frac{x(-x+1)}{x-1} > 0$$

$$D_2 = (-\infty, 0) \cup (1, \frac{1}{r})$$

$$D_1 \cap D_2 = (-\infty, -\frac{1}{r})$$

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