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نام و نام خانوادگی: آریال / سما کمال پاسخنامه تشریحی تکلیف شماره ۷... کلاس: دوازدهم سرپرست B.....

$$[-2, 4] \xrightarrow{-\frac{5}{2}} \left[-\frac{12}{5}, \frac{11}{5}\right] \xrightarrow{\div \frac{3}{5}} [-4, \frac{11}{3}] = D$$

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$$[-2, 3] \xrightarrow[\div 3]{\times 3} [-6, 9] \xrightarrow[\leftarrow + 2]{-2} [-8, 7] = D_{f(x)}$$

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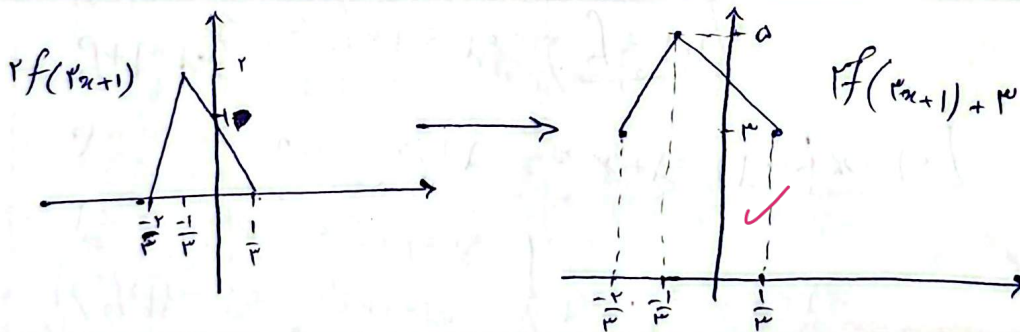
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$$[-1, 3] \xrightarrow{x + \frac{5}{2}} \left[-\frac{3}{2}, \frac{9}{2}\right] \xrightarrow{+\frac{1}{2}} [-1, 5]$$

$$[-1, 5] \xrightarrow{-2} [-3, 3] \xrightarrow{x - \frac{1}{5}} \left(-\frac{3}{5}, \frac{3}{5}\right)$$

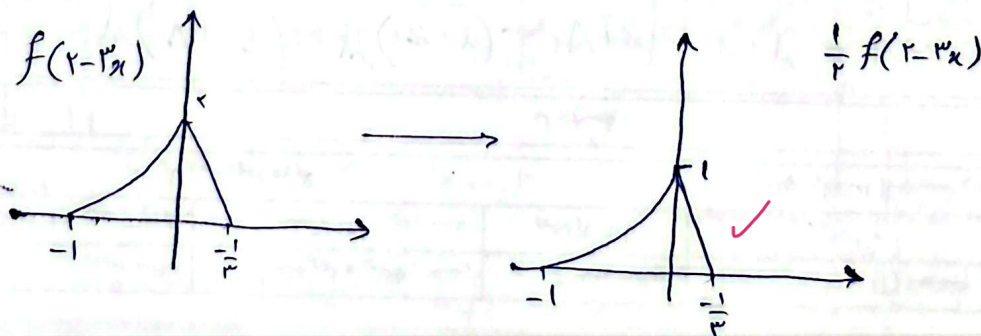
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$$\left. \begin{array}{l} x = (x, y) \\ a = -\frac{1}{x} \end{array} \right\} \rightarrow \frac{1}{x} (x-1) + 1 = y \rightarrow \frac{1}{x} x + \frac{1}{x} x + \frac{1}{x} - \frac{1}{x} = 0$$

$$x^2 - 11x + 1 \rightarrow (x-1)(x-1) \rightarrow \{1, 1\} = x$$

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$$x_1 = 1 \xrightarrow{-1} -1 \xrightarrow{\frac{1}{x}} -\frac{1}{x} = -\frac{1}{1} = -1$$

$$y_1 = 1 \xrightarrow{-1} -1 \xrightarrow{+1} -\frac{1}{x} = -\frac{1}{1} = -1$$

$$\alpha = \frac{1}{x}, \beta = \frac{1}{y}$$

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$$D_{f(x+1)} = (a+1, d] \xrightarrow{\text{بسته}} D_{g(x+1)} = [-2, b-1]$$

$$f(x+1) + g(x+1) \rightarrow D = D_{f(x+1)} \cap D_{g(x+1)} = (-2, d)$$

$$\Rightarrow \begin{cases} a+1 = -2 \Rightarrow a = -3 \\ b-1 = d \Rightarrow b = 4 \end{cases} \quad a-b = -3-4 = -7$$

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$$-1 \leq f(x) \leq 2 \rightarrow -2 \leq 2f-3 \leq 1 \rightarrow 0 \leq |2f-3| \leq 5$$

$$\rightarrow 0 \leq \sqrt{|2f-3|} \leq 1 \rightarrow R_{y_r} = [0, 1]$$

$$-3 \leq x \leq 5 \xrightarrow{\frac{1}{x}} -\frac{3}{x} \leq \frac{x}{x} \leq \frac{5}{x} \xrightarrow{+1} -\frac{1}{x} \leq \frac{x}{x} + 1 \leq \frac{6}{x}$$

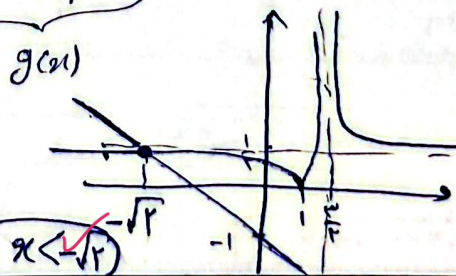
$$D_{y_r} = \left[-\frac{1}{x}, \frac{6}{x}\right]$$

صفحه آخر

$$\left| \frac{(x-2)+1}{2(x-2)+1} \right| = \left| \frac{x-1}{2x-3} \right| \rightarrow \left| \frac{x-1}{2x-3} \right| + 1 + x < 0$$

$$\left| \frac{x-1}{2x-3} \right| < -x-1 \rightarrow x-1 = -2x^2 + x + 3$$

$$2x^2 - 2 = 0 \Rightarrow x = \pm \sqrt{2} \xrightarrow{\text{درستی}} -\sqrt{2} \rightarrow x < -\sqrt{2}$$



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

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

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