

$$-2 \leq \frac{3x+2}{5} \leq 4 \rightarrow -10 \leq 3x+2 \leq 20$$

$$\rightarrow -12 \leq 3x \leq 18 \rightarrow \boxed{-4 \leq x \leq 6}$$

(۲)

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$$-2 \leq x \leq 3 \quad -4 \leq 3x \leq 9 \quad -1 \leq 3x-2 \leq 7$$

$$D_{f(x)} = \boxed{[-1, 7]}$$

(۲)

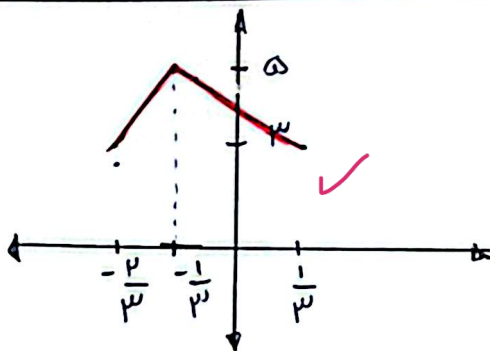
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$$-1 \leq x \leq 3 \rightarrow -2 \leq 3x+1 \leq 10 \rightarrow -1 \leq \frac{3x+1}{4} \leq 5$$

$$-1 \leq 2-5x \leq 5 \rightarrow -3 \leq -5x \leq 3 \rightarrow \frac{3}{5} \leq x \leq \frac{3}{5} \quad \boxed{\left[-\frac{3}{5}, \frac{3}{5}\right]}$$

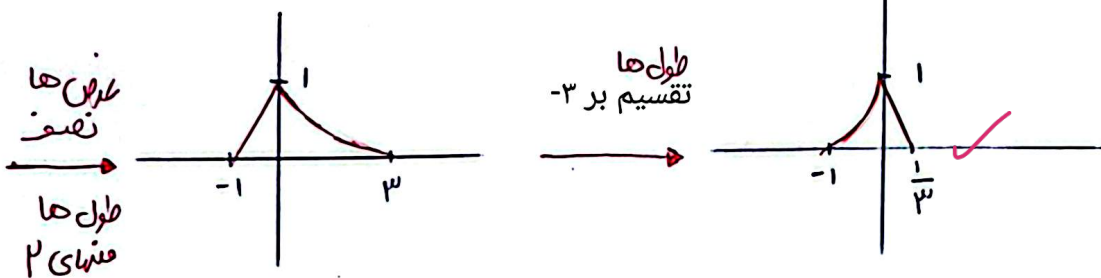
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(۲)

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

$$x-1 = \sqrt{} \rightarrow +\mu \rightarrow \boxed{x=5}$$

$$x-1 = \sqrt{} \rightarrow -\mu \rightarrow \boxed{x=1}$$

(2)

6

$$x_5 = 1 \xrightarrow{-1} -1 \xrightarrow{\times \frac{1}{\mu}} -\frac{1}{\mu}$$

$$y_5 = 1 \xrightarrow{x(-1)+1} -1$$

$$\rightarrow A(-1, -\frac{1}{\mu})$$

$$\boxed{\alpha\beta = \frac{V}{\mu}}$$

(2)

7

$$a < x-1 < 1 \rightarrow a+1 < x < 2$$

$$-1 < x+1 < b \rightarrow -2 < x < b-1$$

$$\left. \begin{array}{l} b-1=2 \rightarrow b=3 \\ a+1=-2 \rightarrow a=-3 \end{array} \right\}$$

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

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

(2)

8

$$R_y = [-1, 2] \xrightarrow{\times 2} [-2, 4] \xrightarrow{-3} [-5, 1] \xrightarrow{+1} [-4, 2] \xrightarrow{\sqrt{}} \boxed{[-4, 2]}$$

$$D_y = [-2, 5] \xrightarrow{+1} [-1, 6] \xrightarrow{\times \frac{1}{2}} \boxed{[-1, 3]}$$

(1)

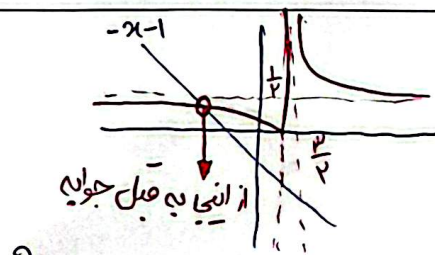
9

صفحه آخر

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

$$\left| \frac{x-1}{2x-3} \right| < -x-1 \Rightarrow \frac{x-1}{2x-3} = -x-1$$

$$\boxed{(-\infty, -\sqrt{2})}$$



$$x = \pm\sqrt{2} \rightarrow -\sqrt{2}$$

(2)

10

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

-9

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

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