

نام و نام خانوادگی: امیرحسین خاشعی یاسفنامه تشریحی تکلیف شماره ۷. کلاس: دوازدهم دبیرستان A.....

$$Df(x) = [-2, 2] \rightarrow -2 \leq x \leq 2$$

$$Df\left(\frac{3x+5}{5}\right) = [-2, 2] \rightarrow -2 \leq \frac{3x+5}{5} \leq 2 \rightarrow -10 \leq 3x+5 \leq 10$$

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

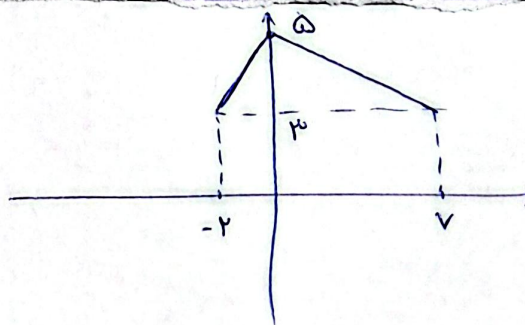
$$-2 \leq x \leq 2 \rightarrow -8 \leq 3x - 2 \leq 2 \xrightarrow{\text{شکل تابع را بیاورید}}$$

$$f(x) \rightarrow \boxed{-8 \leq x \leq 2} \rightarrow \text{جواب}$$

$$-1 \leq x \leq 3 \rightarrow -3 \leq 3x \leq 9 \rightarrow -4 \leq 3x+1 \leq 10 \rightarrow -2 \leq \frac{3x+1}{2} \leq 5$$

$$\left(\begin{array}{l} \text{شکل تابع را بیاورید} \rightarrow -2 \leq 2-5x \leq 0 \rightarrow -4 \leq -5x \leq 3 \\ -4 \leq -5x \rightarrow 4 \geq 5x \rightarrow x \leq \frac{4}{5} \\ -5x \leq 3 \rightarrow 5x \geq -3 \rightarrow x \geq -\frac{3}{5} \end{array} \right) \cap \rightarrow \boxed{\left(-\frac{3}{5}, \frac{4}{5}\right]} \rightarrow \text{جواب}$$

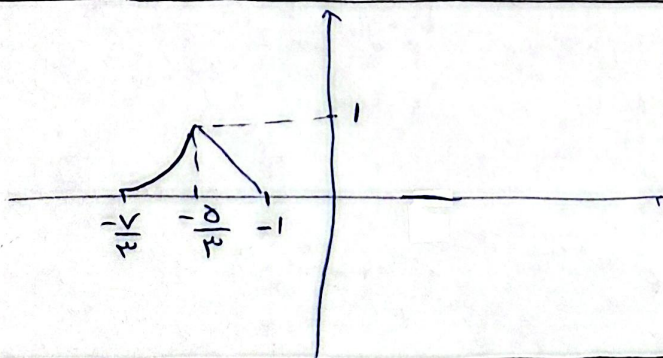
$$-1 \leq x \leq 2 \rightarrow -2 \leq 3x+1 \leq 7$$



$$\frac{1}{2} f(2-3x)$$

$$\frac{1}{2} f(-(3x-2))$$

تعبیر است: $\frac{1}{2}$ ها x ← مقیاس نسبت به
مقدار ها ← y ها $\frac{1}{2}$ برابر



$$y = -\frac{1}{r}x + \frac{r}{8}x + 1 \xrightarrow[\text{(1,2)}]{\text{راسی رسی جبهه}} y' = -\frac{1}{r}(x-2) + 2 \xrightarrow{\text{راسی رسی جبهه}}$$

$$-\frac{1}{r}(x-2) + 2 = 0 \rightarrow (x-2)^r = 4 \rightarrow x-2 = \pm 2 \rightarrow x = 4, 0 \rightarrow \text{جواب}$$

$$(1,2) \rightarrow f(x) \text{ تابع هست} \rightarrow f(1) = 2$$

$$-2f\left(\frac{3x+1}{1}\right) + 1 \rightarrow -2f(1) + 1 = -2 + 1 = -1 \rightarrow \text{جواب}$$

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

راسی رسی جبهه

$$\left(-\frac{1}{3}, -1\right)$$

(α, β)

$$\alpha \cdot \beta = -\frac{1}{3} \times -1 = \frac{1}{3} \rightarrow \text{جواب}$$

$$Df = (a, 2] \rightarrow a < x-1 \leq 2 \rightarrow a+1 < x \leq 3 \rightarrow (a+1, 3] \quad \left\{ \begin{array}{l} a+1 = -2 \\ 3 = 2 \end{array} \right. \rightarrow \text{جواب}$$

$$Dg = [-1, b) \rightarrow -1 \leq x+1 < b \rightarrow -2 \leq x < b-1 \rightarrow [-2, b-1)$$

$$a = -2$$

$$b = 4$$

$$-2 - 4 = -6 \rightarrow \text{جواب}$$

$$-3 \leq x \leq 0 \rightarrow -\frac{1}{2} \leq \frac{x}{2} + 1 \leq \frac{1}{2} \rightarrow \text{شکلهای مشابه} \Rightarrow Dg_r = \left[-\frac{1}{2}, \frac{1}{2}\right]$$

$$-1 \leq f(x) \leq 2 \rightarrow -5 \leq 2f(x) - 3 \leq 1 \rightarrow |2f(x) - 3| \in [0, 5]$$

$$\sqrt{|2f(x) - 3|} \in [0, \sqrt{5}] \rightarrow Rg_r = [0, \sqrt{5}]$$

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

$$\left|\frac{x-1}{2x-3}\right| < -x-1 \rightarrow -x-1 > 0 \rightarrow x < -1$$

$$\text{توازن} \rightarrow \left(\frac{x-1}{2x-3}\right)^2 < (x+1)^2 \rightarrow (x-1)^2 < (x+1)^2 (2x-3)^2 \rightarrow (x+1)^2 (2x-3)^2 - (x-1)^2 > 0$$

$$\text{منخرج} \rightarrow 2(x^2-2)(x^2-x-1) > 0 \rightarrow x = \pm\sqrt{2}, \frac{1 \pm \sqrt{5}}{2} \xrightarrow{x < -1} -\sqrt{2} \text{ فقط راسی}$$

$$\text{جواب} \rightarrow (-\infty, -\sqrt{2}) \cup x < -\sqrt{2}$$