

۱۲، ۵

$$-2 \leq \frac{3n+2}{0} \leq 4 \xrightarrow{\times 0} -10 \leq 3n+2 \leq 10 \xrightarrow{-2} -12 \leq 3n \leq 11$$

$$\xrightarrow{\div 3} -4 \leq n \leq 4 \quad D_f = [-4, 4]$$

(۲)

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$$[-2, 3] \rightarrow f(3n-2) \rightarrow \left. \begin{array}{l} -2 \\ 3 \end{array} \right\} P_f = [-1, 1]$$

(۲)

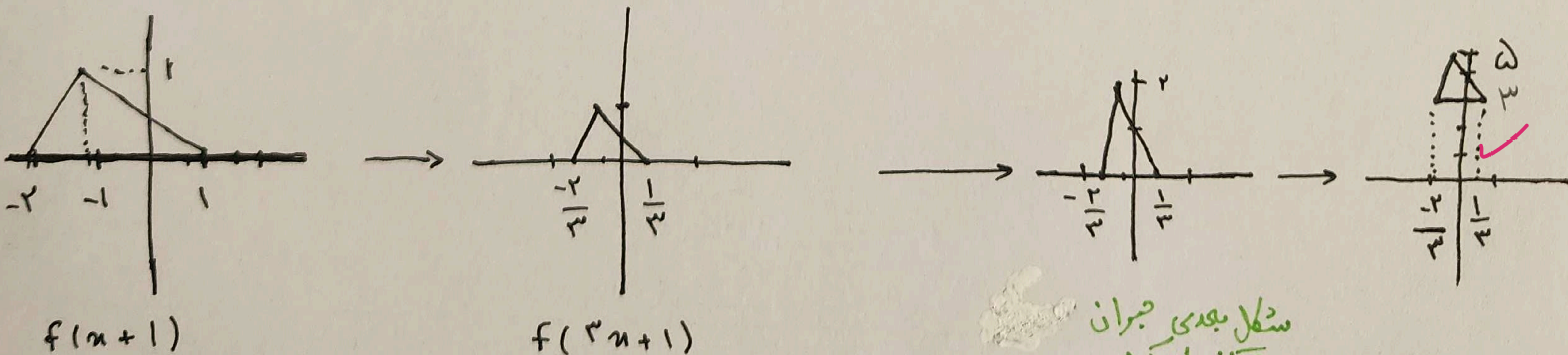
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$$[-1, 3] \rightarrow f\left(\frac{3n+1}{2}\right) \rightarrow \left. \begin{array}{l} -1 \\ 3 \end{array} \right\} \rightarrow [-1, 0] \Rightarrow -1 \leq 2-3n < 0 \rightarrow -3 \leq -3n < +3 \rightarrow -\frac{3}{0} < n \leq \frac{3}{0} \quad D_f = \left(-\frac{3}{0}, \frac{3}{0}\right]$$

(۲)

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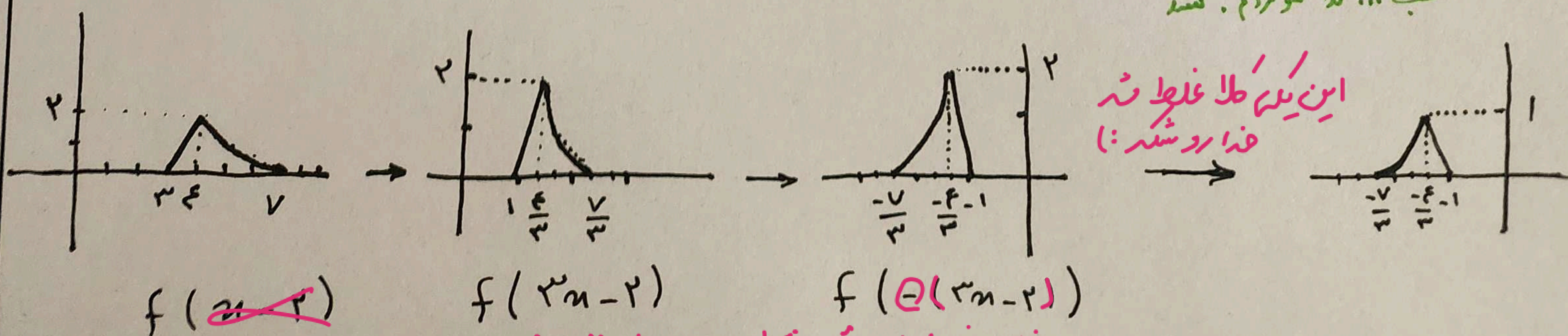
بدتر از تصور شد



(۲)

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



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۵

این یک تلا غلطه نه
فدا روشنه

خب ... تلا شو کردم. نشد

چنین چیزی نداریم. فقط روی n اعمال میشه $3n-2$

$$\frac{-b}{2a} = \frac{3}{0} \rightarrow \text{مرتفع}$$

مرتفع

$$-\frac{1}{3} \left(n - \frac{3}{0} \right)^2 + \frac{21}{20}$$

$$-\frac{1}{3} (n - 4)^2 + 3$$

$$-\frac{1}{3} (n - 4)^2 = 0 \rightarrow (n - 4)^2 = 9$$

$$\Delta n = \frac{17}{5}$$

$$\Delta y = \frac{47}{20}$$

$$n - 4 = \pm 3 \rightarrow \begin{matrix} 1 \\ \swarrow \searrow \\ 7 \end{matrix}$$

$$\text{مرتفع} \Rightarrow -n^2 + 2n + 3 \xrightarrow{+2} \begin{vmatrix} -1 & 2n \\ 3 & \end{vmatrix} \xrightarrow{3n} \begin{vmatrix} -1 & 4 \\ 3 & \end{vmatrix}$$

$$\frac{1}{3} x - 7 = \frac{7}{3}$$

$$\begin{vmatrix} -1 & -1 \\ 3 & -7 \end{vmatrix} \xrightarrow{y+1}$$

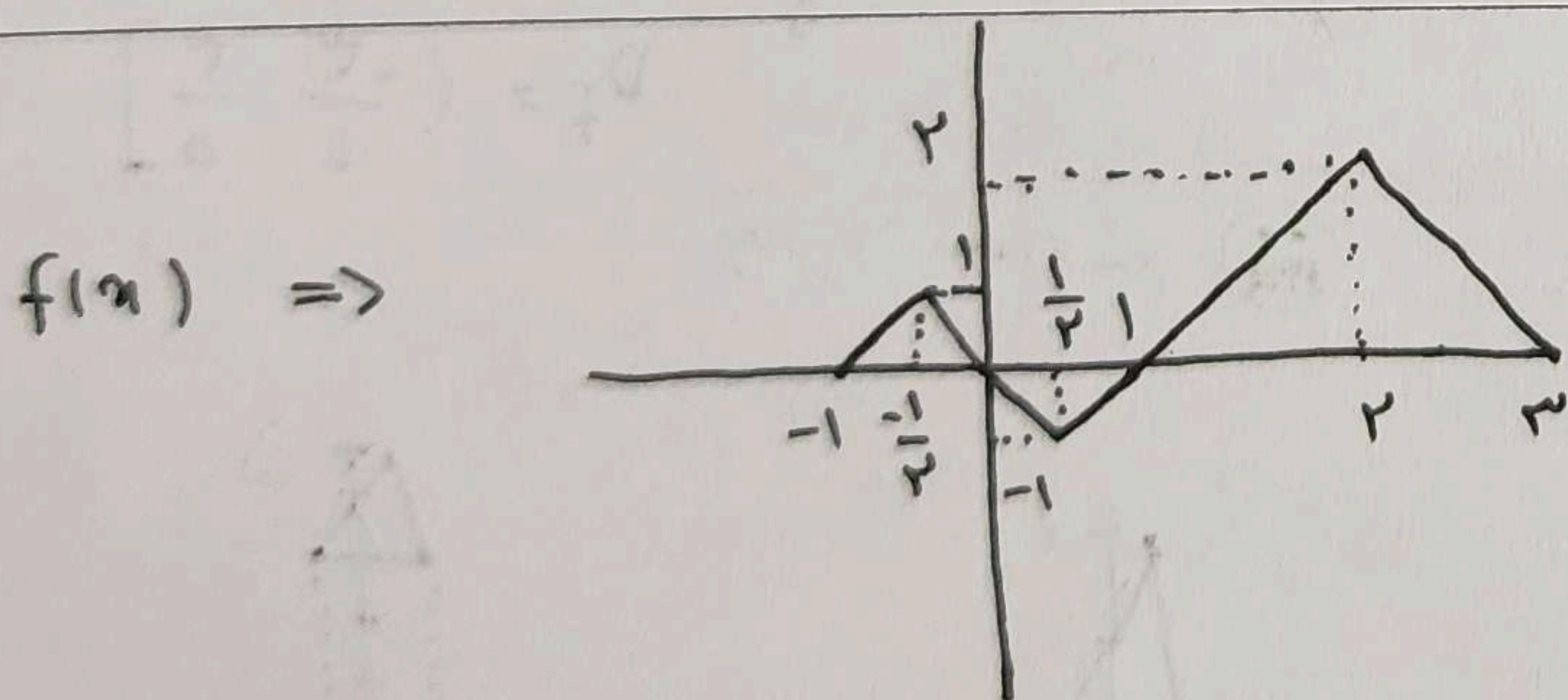
$$1 - \frac{2}{3} f(3n+2)$$

y_3 y_5 x_3 $2n_5$
 اداده به بالا به بالا به بالا به بالا

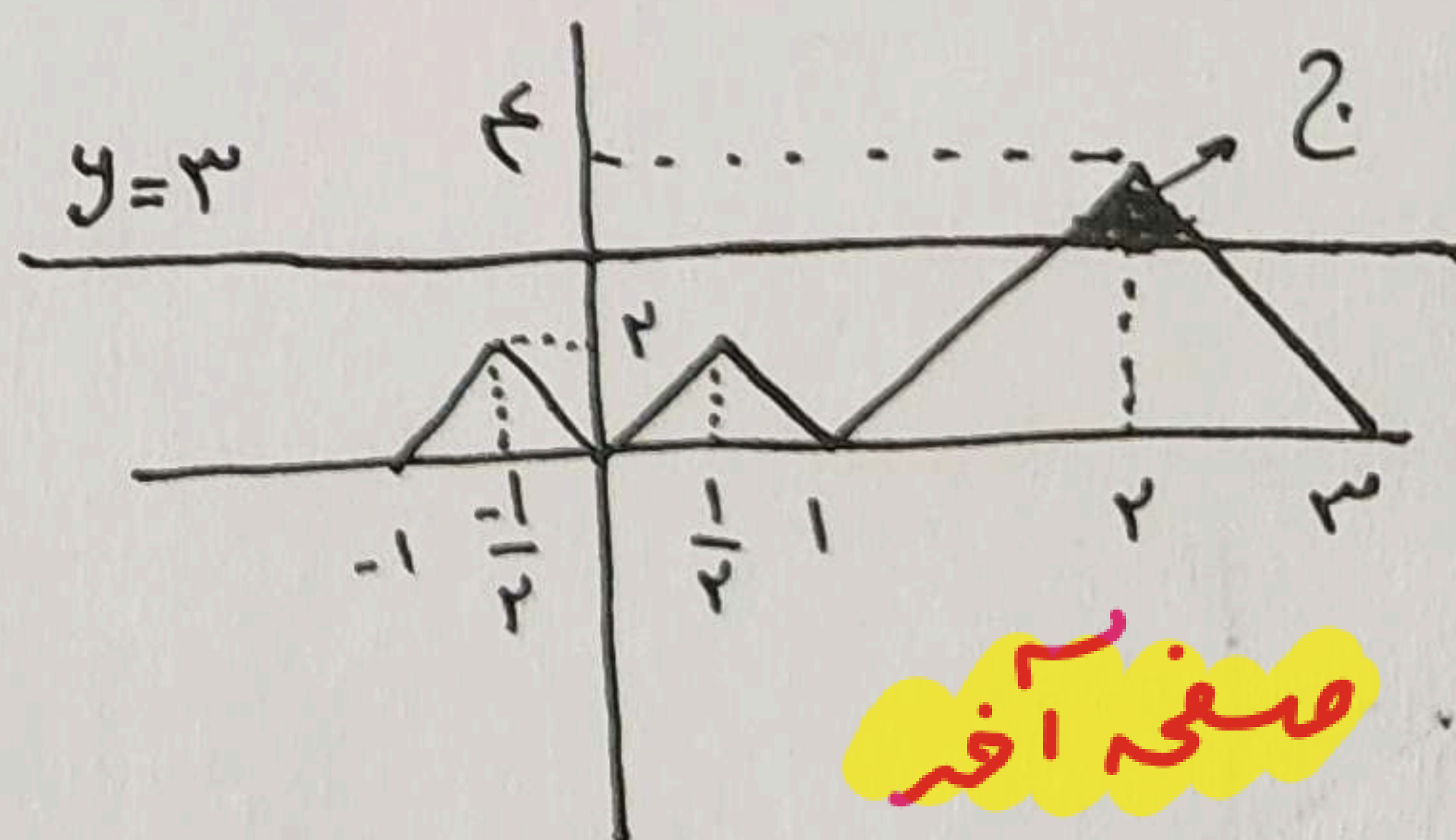
به جاشی استباهه
نمی دونم کجا درسته :-

صفحه ۳ افه

اینکه بلد شیم وی چرا
هر دفعه به چیزی می نویسیم
من توی تکالیفم برای شما



$$|2f(n)|$$

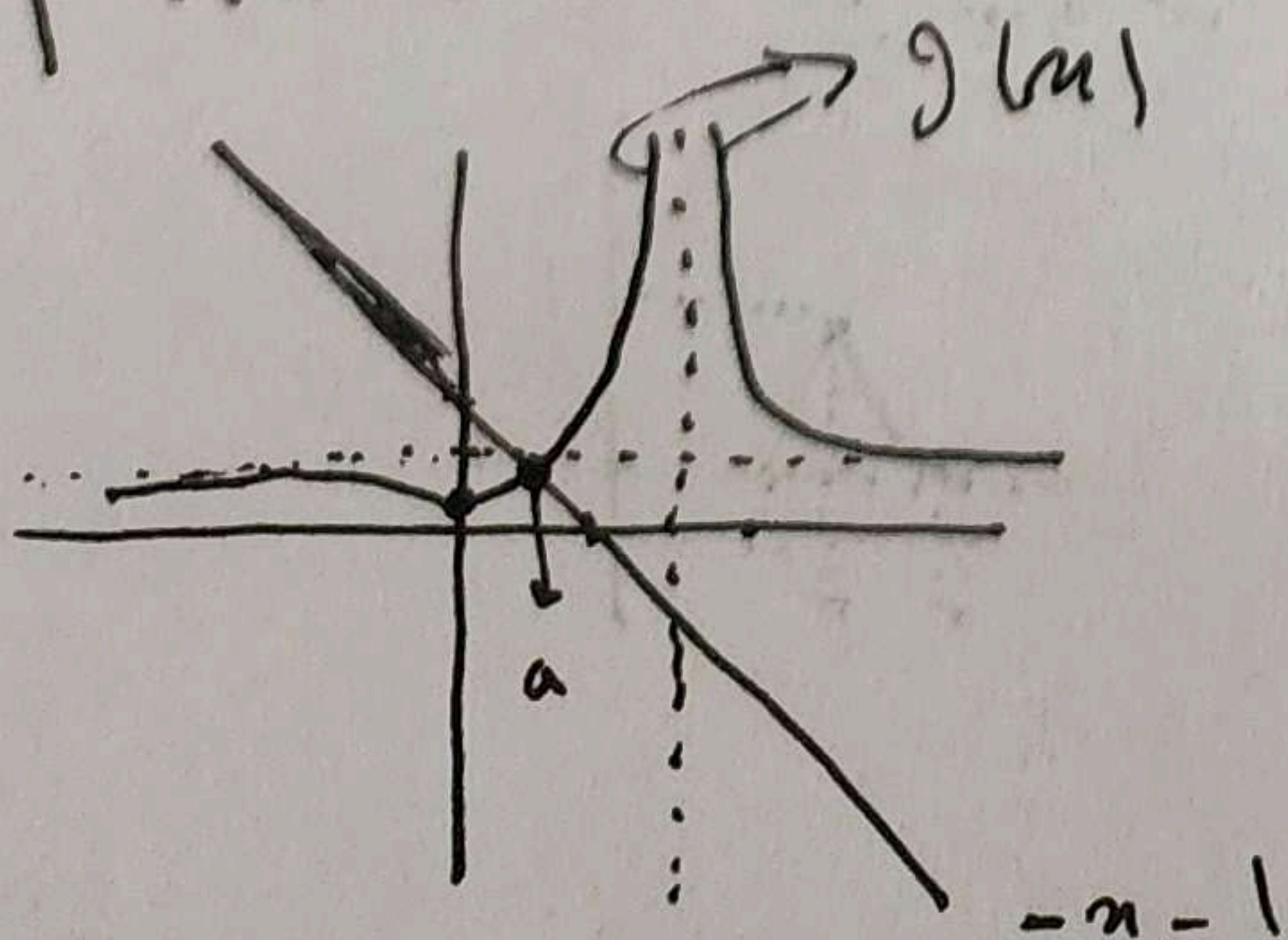


$$f = \left[\frac{7}{4}, \frac{9}{4} \right]$$

$$\begin{aligned} 4n - 4 &\geq 3 \rightarrow n \geq \frac{7}{4} \\ -2n + 12 &\geq 3 \rightarrow n \leq \frac{9}{4} \end{aligned}$$

صفحه ۳ افه

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

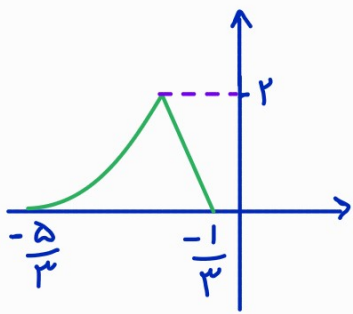


$$n + g(n) < 0$$

$$\left| \frac{n-1}{2n-3} \right| < -n-1$$

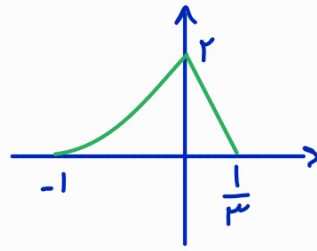
$$(-\infty, a)$$

صفحه ۳ افه



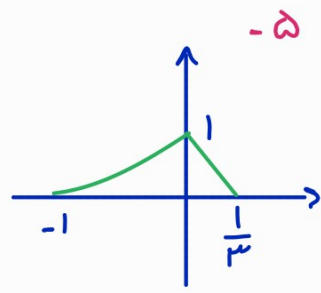
$$y = f(-r_n)$$

واحد به راست $\frac{r}{r^2}$



$$y = f(-r(n - \frac{r}{r^2}))$$

$$y = f(r - r_n)$$



$$y = \frac{1}{r} f(r - r_n)$$

$$\left. \begin{array}{l} \text{رأس} \\ | \\ r \end{array} \right\} \Rightarrow \begin{cases} r_n + r = 1 \rightarrow n = -\frac{1}{r} \Rightarrow \alpha = -\frac{1}{r} \\ y = 1 - r f(1) = 1 - r(f) = -v \Rightarrow \beta = -v \end{cases} \Rightarrow \alpha\beta = \boxed{\frac{v}{r}}$$

$$D_f = (a, f] \rightarrow a < n-1 \leq f \rightarrow a+1 < n \leq \infty \Rightarrow D_{f(n-1)} = (a+1, \infty]$$

$$D_g = [-1, b) \rightarrow -1 \leq n+1 < b \rightarrow -r \leq n < b-1 \Rightarrow D_{g(n+1)} = [-r, b-1)$$

$$\left. \begin{array}{l} a+1 = -r \rightarrow a = -r \\ b-1 = \infty \rightarrow b = \infty \end{array} \right\} \rightarrow a-b = \boxed{-9}$$

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

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

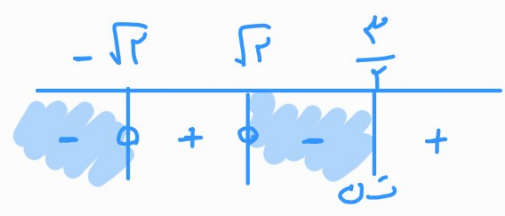
$$0 \leq \sqrt{|rf - r|} \leq \sqrt{\infty} \Rightarrow R_f = [0, \sqrt{\infty}]$$

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

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

از به قدر مطلق بزرگتر شده پس باید مثبت باشد : $-1-x > 0 \rightarrow x < -1$

$$\xrightarrow{x < -1} \frac{x-1}{2x-3} < -1-x \rightarrow \frac{x^2-4}{2x-3} < 0 \rightarrow \frac{2(x-\sqrt{2})(x+\sqrt{2})}{2x-3} < 0$$



$$\xrightarrow{x < -1} x < -\sqrt{2} \rightarrow (-\infty, -\sqrt{2})$$