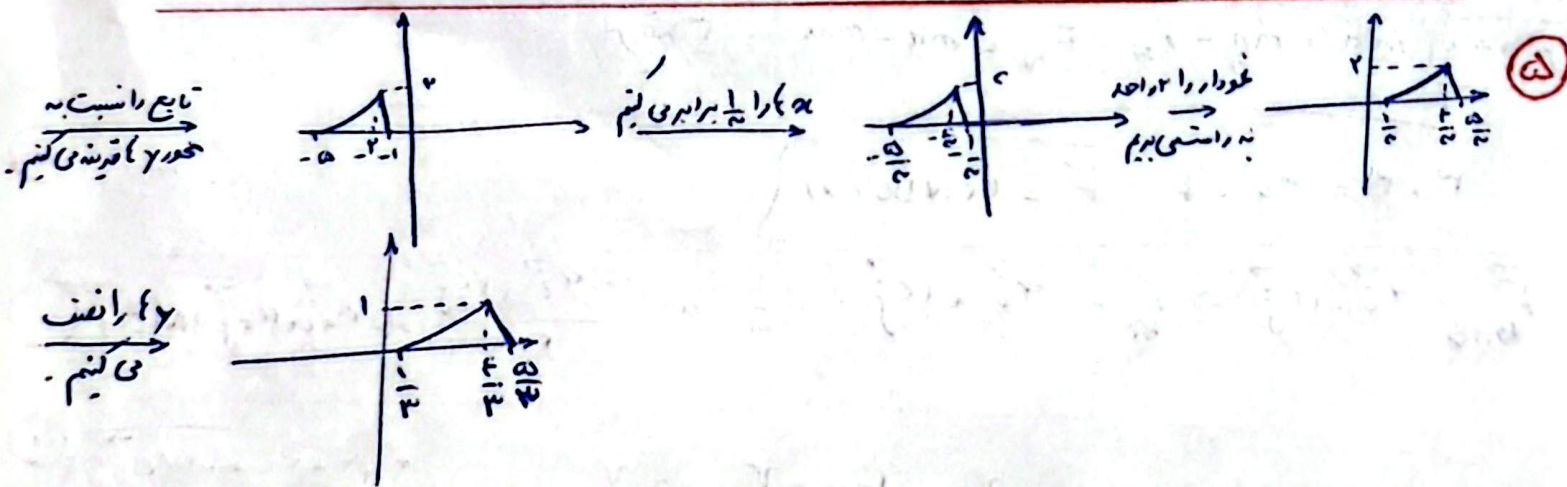
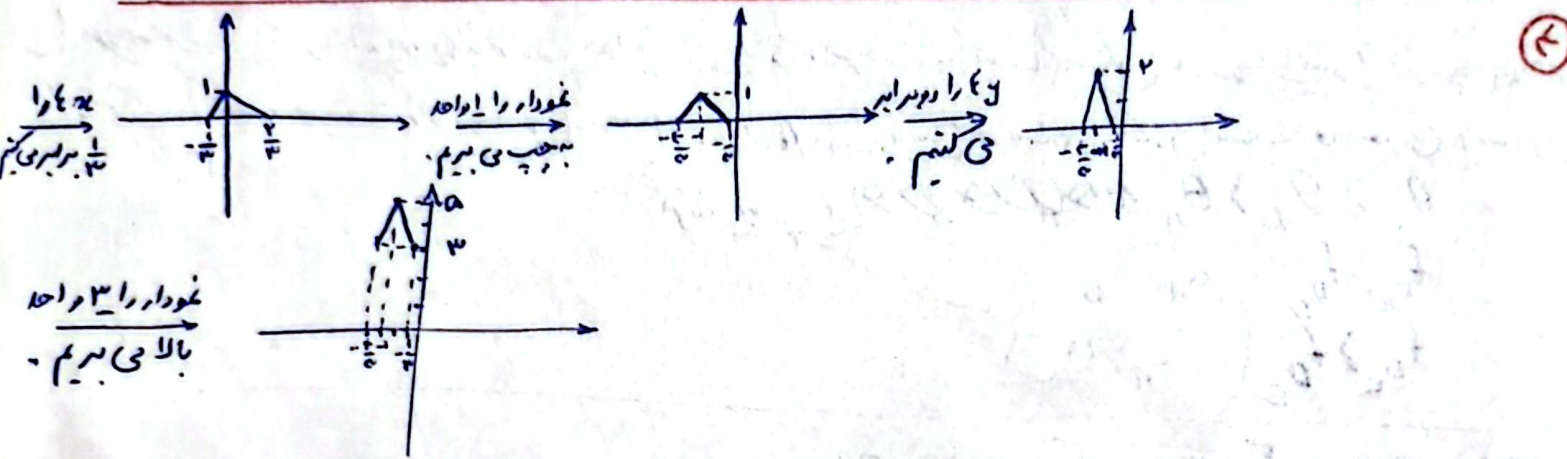


دوازدهم، سری ۱ تکلیف شماره ۷۱
 در روش کسایان - $-12 \leq 3x \leq 12$ - $-4 \leq x \leq 4$
 $-2 \leq \frac{3x+2}{5} \leq 2$ - $-10 \leq 3x+2 \leq 10$ - $-12 \leq 3x \leq 12$ - $-4 \leq x \leq 4$
 $D_f = [-4, 4]$ ①

$-2 \leq x \leq 3$ - $-4 \leq 3x \leq 9$ - $-1 \leq 3x-2 \leq 7$ $D_f = [-1, 7]$ ②

$-1 \leq x \leq 3$ - $-3 \leq 3x \leq 9$ - $-2 \leq 3x+1 \leq 10$ - $-1 \leq \frac{3x+1}{2} \leq 5$
 $-1 \leq 2-5x \leq 5$ - $-3 \leq -5x \leq 3$ - $-\frac{3}{5} \leq x \leq \frac{3}{5}$ $D_f = [-\frac{3}{5}, \frac{3}{5}]$ ③



$y_{جدید} = -\frac{1}{4}(x-4)^2 + 3 \rightarrow y=0 \quad (x-4)^2 = 9 \quad \begin{cases} x=1 \\ x=7 \end{cases}$ ④

$3x+c=-1 \quad x=-1=\alpha \quad 1-2 \times 4 = -7 = \beta \quad \alpha\beta = 7$ ⑤

$D_g(x+1) = [-2, b-1]$ $D_f(x-1) = (a+1, 5]$ $a-b = -9$ ⑥
 $b-1=5 \rightarrow b=6$
 $a+1=-2 \rightarrow a=-3$

$-r \leq x \leq a$ $-\frac{r}{r} \leq \frac{x}{r} \leq \frac{a}{r}$ $-\frac{1}{r} \leq \frac{x}{r} + 1 \leq \frac{a}{r}$ $D_{f(x)} = [-\frac{1}{r}, \frac{a}{r}]$ (9)
 $-1 \leq y \leq r$ $-r \leq ry \leq r$ $-a \leq ry - r \leq 1$ $0 \leq \sqrt{ry - r} \leq \sqrt{a}$ $R_{g_r} = [0, \sqrt{a}]$

$g(x) = f(x-r) + 1 = \left| \frac{x-1}{rx-r} \right| + 1$

$\underbrace{x}_{\text{جمله}} + \underbrace{\left| \frac{x-1}{rx-r} \right| + 1}_{\text{شبه}} < 0 \quad x < 0 \Rightarrow \frac{x-1}{rx-r} > 0 \quad x + \frac{x-1}{rx-r} + 1 < 0$

~~$rx^2 - rx + x - 1 + rx - r < 0$~~

$rx^2 - rx + x - 1 + rx - r < 0$
 $rx^2 - r < 0 \quad x^2 > r \quad \boxed{x < -\sqrt{r}}$