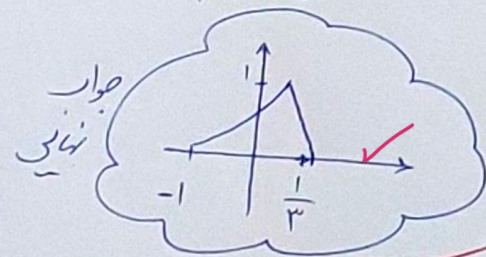
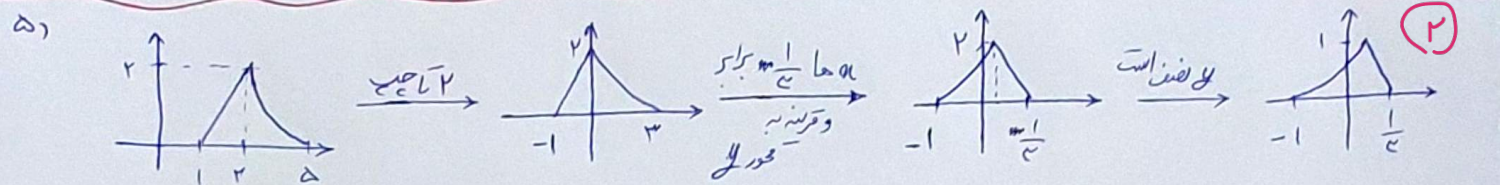
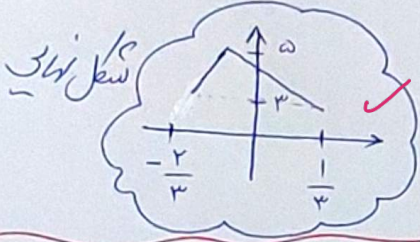
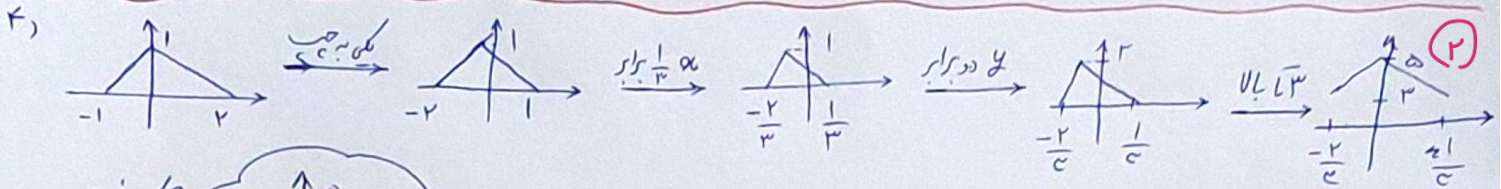


1) $-2 \leq \frac{3n+2}{5} \leq 4 \rightarrow -10 \leq 3n+2 \leq 20 \rightarrow -12 \leq 3n \leq 18 \rightarrow \boxed{-4 \leq n \leq 6}$ (۲) به نام خداوند جان و خرد

2) $f(3n-2)$, $D = [-2, 3] \rightarrow \begin{cases} -4-2=8 \\ 9-2=7 \end{cases} \rightarrow \boxed{[-8, 7]}$ (۲) پرسیا طباطبائی - تکلیف شماره ۷
دوازدهم دختر B - ۲۵

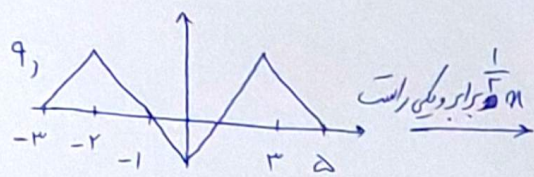
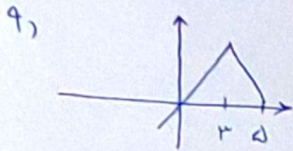
3) $f\left(\frac{3n+1}{2}\right) \rightarrow \frac{3(-1)+1}{2} = -1$, $\frac{1}{2} = 5 \rightarrow [-1, 5] \rightarrow -1 \leq 2-5n < 5 \rightarrow -3 \leq -5n < 3$ (۲)
 $\frac{3}{5} \geq n > \frac{3}{5}$



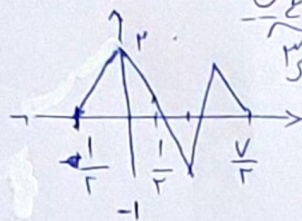
6) $a(x-x_0)^2 + y_0 \rightarrow -\frac{1}{3}(x-4)^2 + 3y \rightarrow -\frac{1}{3}(x-4)^2 + 3 = 0 \rightarrow -\frac{1}{3}(x-4)^2 = -3$
 $\rightarrow (x-4)^2 = +9 \rightarrow x-4 = \pm 3 \rightarrow \boxed{x = 7, 1}$ (۲)
در اینجا از راس سهمی استفاده می‌کنیم و کل شکل را رسم نمی‌کنیم

7) $(1, 4) \xrightarrow{\text{واحد صاف}} (-1, 4) \xrightarrow{\frac{1}{2} \alpha} (-\frac{1}{2}, 4) \xrightarrow{\text{رافعه در } x} (-\frac{1}{2}, -8) \rightarrow (-\frac{1}{2}, -8)$ (۲)
 $\xrightarrow{\text{کل نمودار کنیم}} (-\frac{1}{2}, 7) \rightarrow \alpha\beta = -\frac{1}{2} \times (-7) = \boxed{\frac{7}{2}}$

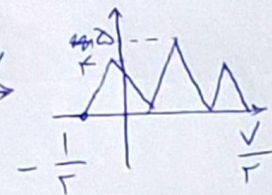
8) $a < n-1 \leq 4 \rightarrow a+1 < n \leq 5$
 $-1 \leq n+1 < b \rightarrow -2 \leq n < b-1$ (۲)
 $\rightarrow \begin{cases} a+1 = -2 \rightarrow a = -3 \\ b-1 = 5 \rightarrow b = 6 \end{cases} \rightarrow a-b = -3-6 = \boxed{-9}$



نصفه راست



نصفه چپ



(2)

$$[0, \sqrt{2}] \leftarrow \text{بر}$$

$$[-\frac{1}{\sqrt{2}}, \frac{1}{\sqrt{2}}] \leftarrow \text{امن}$$

1.) $\underbrace{\left| \frac{n-1}{2n-3} \right| + 1 + n}_{g(n)} < 0 \rightarrow \underbrace{\left| \frac{n-1}{2n-3} \right|}_{+} < -1-n \rightarrow -1-n > 0$

(2)

حس: $|n-1| = 1-n$, $|2n-3| = 3-2n$ و $n+1 + \frac{1-n}{3-2n} < 0$

$\rightarrow (n+1)(3-2n) + 1 - n < 0 \rightarrow -2n^2 + n + 3 + 1 - n < 0 \rightarrow -2n^2 + 4 < 0$

بافتن

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

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

$n^2 > 2$

$n < -\sqrt{2}$

$n < -1$ یا $n > 1$