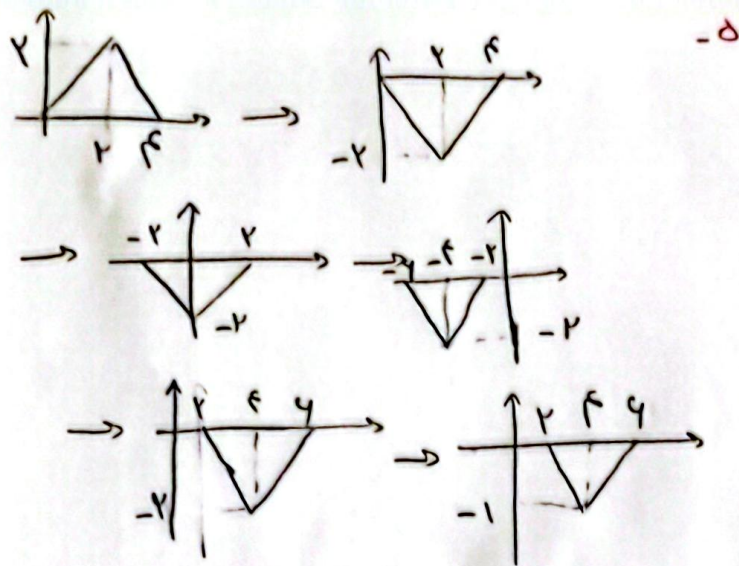
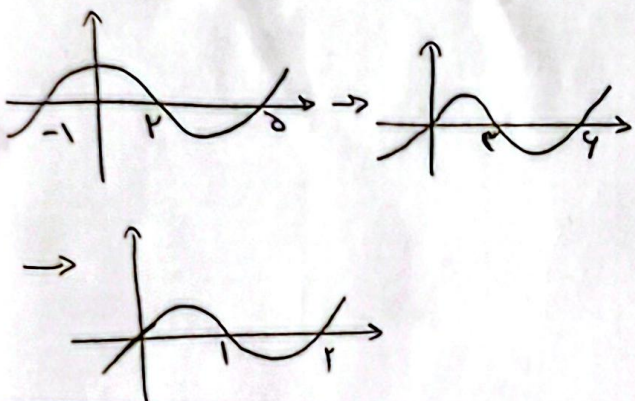




$$-(x+2)(f(x)-1) \geq 0 \rightarrow (x+2)(1-x) \geq 0$$

$$\frac{-2}{+} \frac{0}{-} \frac{1}{+} \frac{2}{-} \rightarrow [-2, 0] \cup [1, 2]$$

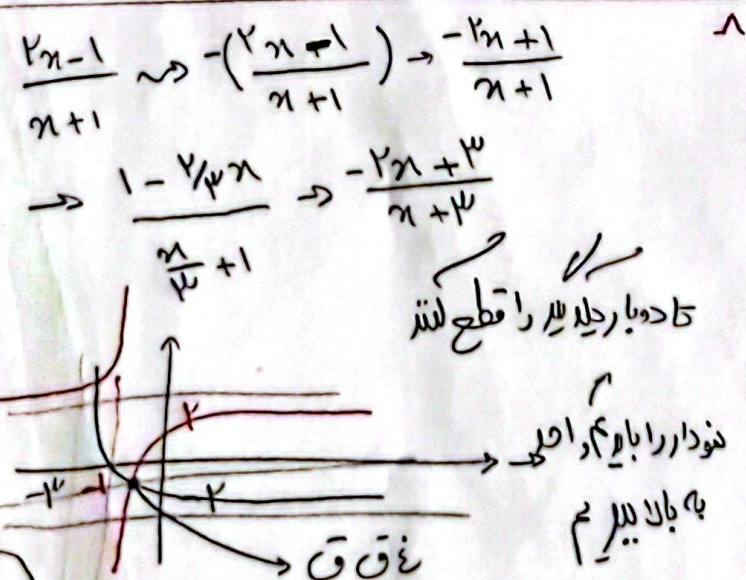


$$|2x-3|+1 \rightarrow |2(x+k)-3|+1$$

$$\rightarrow |2(x+k)-3|-2=y \rightarrow x=0$$

$$|2k-3|-2 \leq \epsilon \rightarrow |2k-3| \leq 4$$

$$k \in [-1/2, 5/2] \rightarrow k \in [-1/2, 5/2]$$



-1

$$- \epsilon \leq 2x-2 \leq \epsilon$$

$$\rightarrow -2 \leq 2x-2 \leq \epsilon \rightarrow -\frac{\epsilon}{2} \leq x-1 \leq \frac{\epsilon}{2}$$

$$\rightarrow - \epsilon \leq 2x-2 \leq \epsilon$$

$$\rightarrow -2 \leq 2x-2 \leq \epsilon \rightarrow -\frac{\epsilon}{2} \leq x-1 \leq \frac{\epsilon}{2}$$

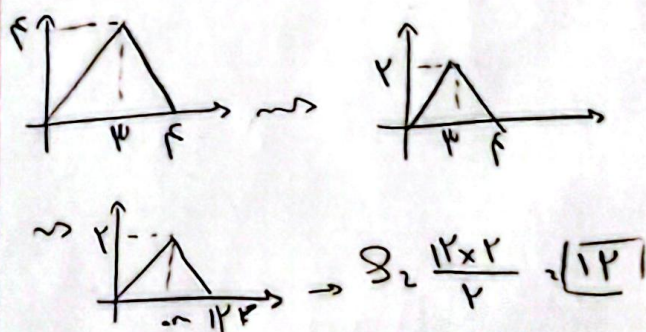
-2

$$\rightarrow x+\sqrt{x-2} \sim f(x+2), x-2+\sqrt{x-2}$$

$$\rightarrow x-2+\sqrt{x-2} \sim xy$$

$$\hookrightarrow \sqrt{x-2} \sim y \rightarrow y-\epsilon \leq y \leq y+\epsilon$$

$$\rightarrow x, y \Rightarrow \left| \frac{1}{x} - \frac{1}{y} \right| \leq \epsilon$$



-3

$$\rightarrow \left| \frac{x}{2x-1} \right| \rightarrow f\left(\frac{x-a}{2}\right), \frac{y-a}{2}$$

$$\rightarrow f(x) \sim \frac{x-a-1-a}{2} \rightarrow \frac{x-2a-1}{2} \sim -\frac{1}{2}$$

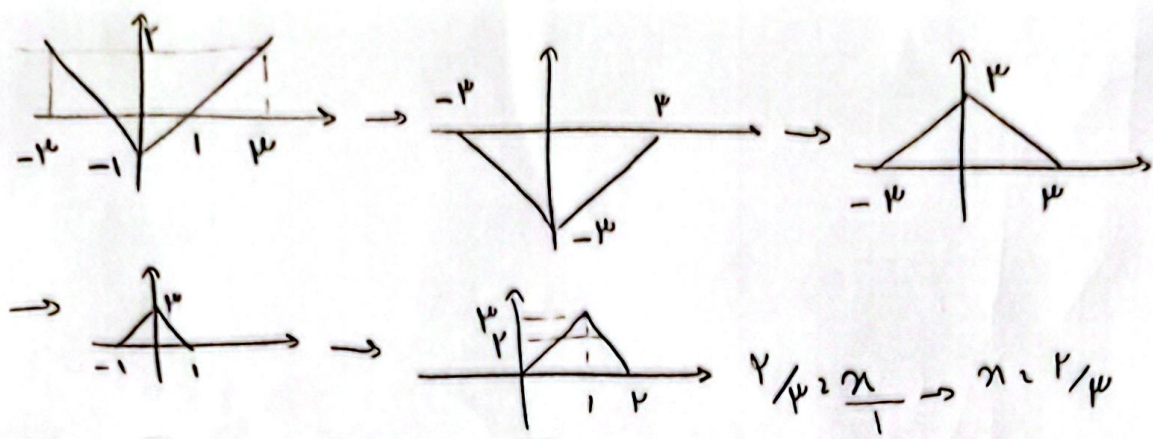
$$y, 2x'-1 \rightarrow 2\left(\frac{x-a}{2}\right)-1 \sim x-a-1$$

$$\Rightarrow x-a-1 \sim 2 \rightarrow x-a \sim 3$$

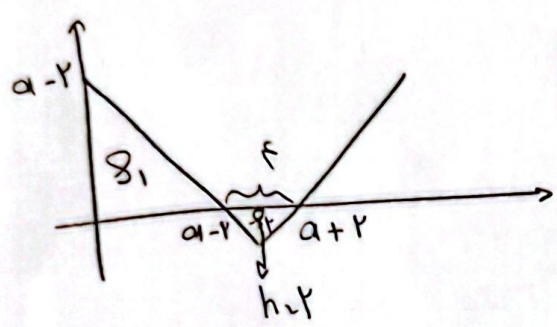
$$\frac{x-a}{2} \sim \frac{3}{2}$$

$$\left| \frac{2x-2a}{x-2a-2} \right|$$

$$x \sim 4, a \sim 2$$



$$\Rightarrow S_2 = \frac{1}{\mu} \times 1 \times \frac{1}{\mu} \times \sqrt{\frac{1}{\mu}}$$



$$S_{12} = \frac{(a-y)^y}{y}$$

$$S_{12} = \epsilon \times \frac{y}{y} = \epsilon$$

$$S_1 + S_{12} = \frac{a^y + \epsilon - \epsilon a}{y} + \epsilon = \frac{a^y + \epsilon - \epsilon a}{y} + \epsilon$$

$$a^y - \epsilon a + \epsilon + \frac{1}{y} \epsilon \rightarrow a^y - \epsilon a + \frac{1}{y} \epsilon$$

$$(a-1)(a-\frac{1}{y}) \rightarrow 0$$

$\downarrow$
 $a=1$ $\rightarrow a=\frac{1}{y}$

if $a=1$ $\propto$

if $a=\frac{1}{y}$ $\checkmark$

$$a-y > 0 \rightarrow a > y \Rightarrow a \neq 1 \rightarrow f(n) = |n-y| - y$$

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