

الف) $-4 \leq x \leq 2 \Rightarrow -4 \leq 3x-2 \leq 4 \Rightarrow \frac{-2}{3} \leq x \leq \frac{6}{3} \Rightarrow D_{f(x)} = \left[-\frac{2}{3}, 2\right]$

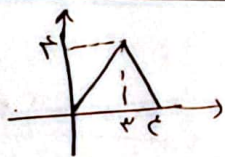
ب) $-4 \leq x \leq -2 \Rightarrow -12 \leq 3x-2 \leq 4 \Rightarrow D_{f(x)} = [-4, 2]$

تابعی اکبراصدی $\Rightarrow x-2 + \sqrt{x-4}$

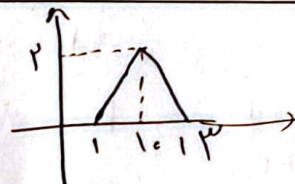
از آنجایی که تابع $\Rightarrow$ هر شیب مثبت $y=x$ یعنی شیبش کردن
اکبراصدی (دو خط)
ن = و از روش راجع می گذریم می توانیم
ن جای فارول تابع و خود تابع را ساده می سازیم

$\Rightarrow x-2+\sqrt{x-4} = x \Rightarrow x-4 = 4$
 $x=8 \quad y=8$

$f(3n+1)$



$\Rightarrow f(n) \Rightarrow$



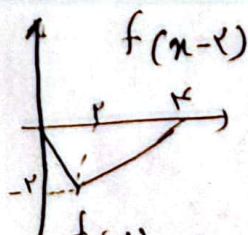
$S = \frac{12n^2}{2} = 12$

$f(2) = -3$

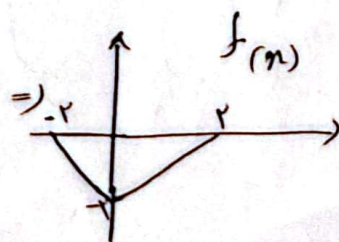
$f\left(\frac{n'-a}{2}\right) = \frac{y'-a}{2}$

$\left\{ \begin{array}{l} -3 = \frac{y'-a}{2} \Rightarrow a-4 = y' \\ 2 = \frac{n'-a}{2} \Rightarrow 4+a = n' \end{array} \right.$

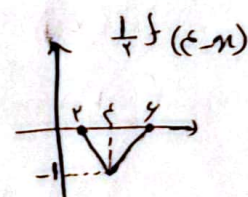
$a-4 = 2(4+a) - 8 \Rightarrow a-4 = 8+2a-8 \Rightarrow a = -4$



$f(4) = 0$
 $f(2) = 0$
 $f(0) = -2$



$\left\{ \begin{array}{l} 4-x = -2 \\ 4-x = 2 \\ 4-x = 0 \end{array} \right.$



$f(4) = 0$
 $f(2) = 2$
 $f(6) = -1$

$$(x-y)f(x_{n-1}) \geq 0$$

$$\begin{aligned} x_{n-1} = 0 &\Rightarrow x = 0 \Rightarrow y = 0 \\ x_{n-1} = 1 &\Rightarrow x = 1 \Rightarrow y = 0 \\ x_{n-1} = -1 &\Rightarrow x = 0 \Rightarrow y = 0 \end{aligned}$$

$$D = (-1, 0) \cup (1, 2)$$

$$|y(x+k) - y| - y = |y(x-y) + 1| \xrightarrow{x=0} |y(k-y) - y| = f$$

$$y(k-y) = y \Rightarrow k = \frac{y}{y} \checkmark$$

$$y(k-y) = -y \Rightarrow k = \frac{-y}{y} \times$$

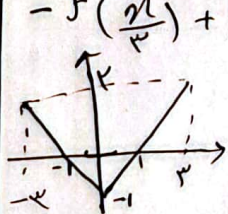
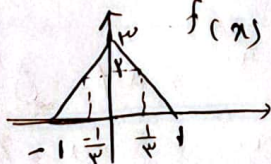
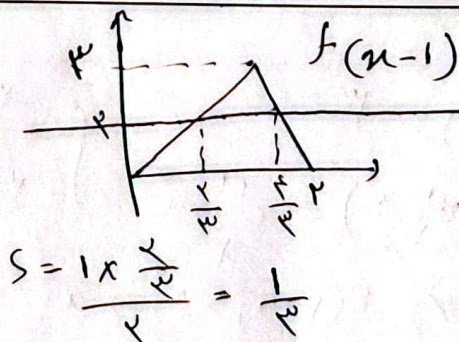
$$f(n) = \frac{y_{n-1}}{n+1} \Rightarrow -\frac{y \frac{n}{y} - 1}{\frac{n}{y} + 1} = -\frac{y_{n-1}}{n+y} = f(-\frac{n}{y})$$

$$-\frac{y_{n-1}}{n+y} + k = \frac{y_{n-1}}{n+1} \Rightarrow k = \frac{y_{n-1}}{n+1} + \frac{y_{n-1}}{n+y} = \frac{y_{n-1} + y_{n-1}}{n^2 + y_{n-1}} = k$$

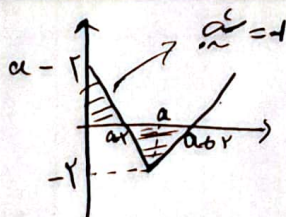
$$(f-k)n^2 + (f-ek)n - y - yk = 0$$

$$\Delta = 0 \Rightarrow yk^2 - k + 1 = 0 \Rightarrow k^2 - 1 = 0 \Rightarrow k = 1 \text{ or } k = -1$$

$$-f(\frac{n}{y}) + y$$


 $\Rightarrow$

 $\Rightarrow$


$$S = 1 \times \frac{y}{y} = \frac{1}{y}$$



$$f(n) = |n - y| - y$$

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

$$\frac{a^y - \epsilon a + \epsilon}{y} + \frac{1}{y} = \frac{a}{y} \Rightarrow a^y - \epsilon a + \epsilon = 1 \Rightarrow a < \frac{1}{y} \checkmark$$