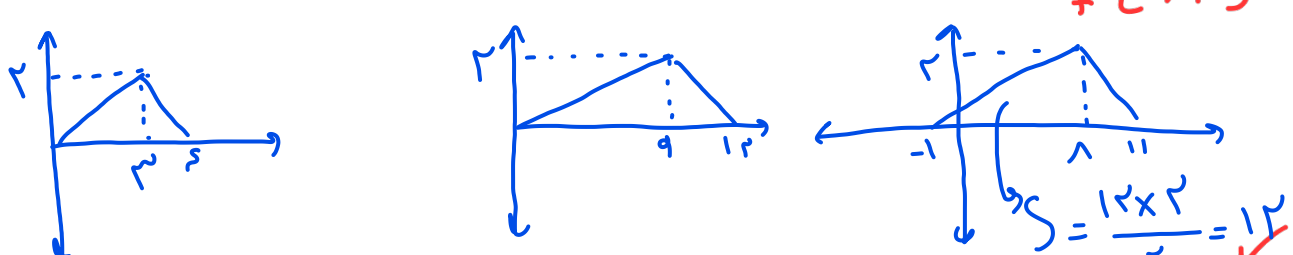
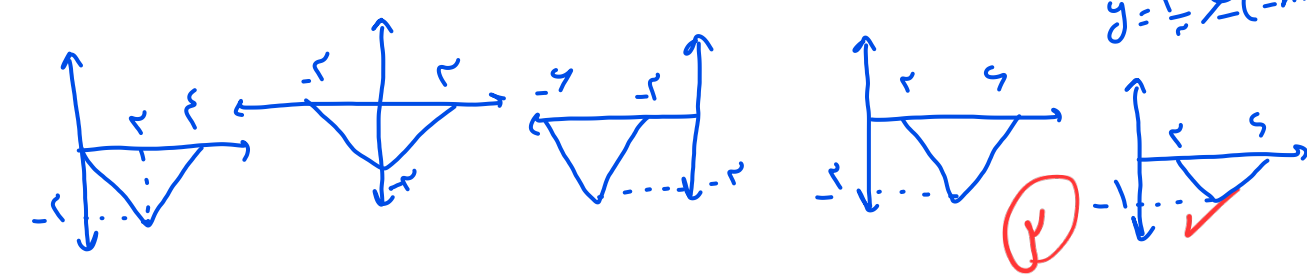


۱۹,۷۵

$-۴ \leq n \leq ۲$ $\Rightarrow -۱۴ \leq ۳n-۲ \leq -۸$ $\Rightarrow D_f = [-۱۴, -۸]$ ✓	$\leftarrow$ $-۴ \leq ۳n-۲ \leq ۲$ $\Rightarrow -۲ \leq ۳n \leq ۴$ $\Rightarrow -\frac{۲}{۳} \leq n \leq \frac{۴}{۳}$ ✓	الف
$f(n-۲) = n-۲ + \sqrt{n-۴}$ $y = n$ در ادامه محل برخورد این تابع با محور دای خواصیم $n-۲ + \sqrt{n-۴} = n \Rightarrow n = ۸$ $y = n-۲ + \sqrt{n-۴} \Rightarrow y = ۸$ ✓		
$f(۳n+۱) = \frac{g(n)}{۲} \Rightarrow f(n+۱) \Rightarrow f(n)$	 $D_f = [۱, ۱۳]$ (۱,۷۵)	۳
$\frac{x'-a}{۲} = ۲ \Rightarrow x' = a+۴$ $y' = a+۲f(\frac{a+۴-a}{۲})$ $y' = a-۶$	$a-۶ = ۲(a+۴) - ۸$ $a-۶ = ۲a \Rightarrow a = -۶$ ✓ (۲)	۴
$y = f(n-۲)$ $y = f(n)$ $y = f(n+۴)$ $y = f(-n+۴)$ $y = \frac{1}{۲} f(-n+۴)$		۵

$$f(x) = 0 \rightarrow x = -1, 2, 0$$

$$f(x+1) = 0 \rightarrow x = 0, 1, 2$$

$$-(x+1)f(x+1) \begin{array}{c} -2 \quad 0 \quad 1 \quad 2 \\ | \quad | \quad | \quad | \\ - \quad + \quad - \quad + \quad - \end{array}$$

$$\Rightarrow D = [-2, 0] \cup [1, 2] \checkmark$$

(2)

$$g(x) = f(x+K) - 2 \quad f(0) = g(0)$$

$$g(x) = |x(x+K) - 2| + 1 \Rightarrow \xi = |xK - 2| + 1$$

$$g(x) = |x(x+K) - 2| + 1 - 3 \Rightarrow |xK - 2| = 2$$

$$g(x) = |x(x+K) - 2| - 2 = f(1) = 1 \quad K = 1, 0 \quad K = -1, 0 \text{ غلط}$$

$$y = \frac{-2x+3}{x+2} + K$$

$$\frac{-2x+3}{x+2} + K = \frac{2x-1}{x+1}$$

$$(K-2)x^2 + 2x(K-1) + 3K+7$$

المعادلة يجب ان تكون خطية

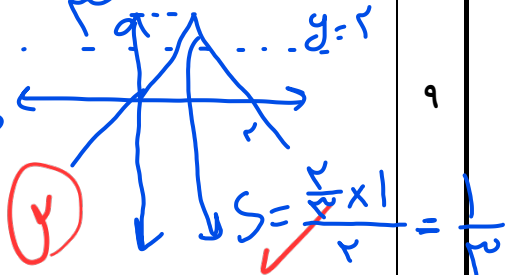
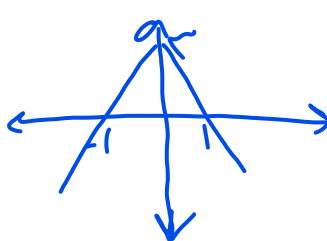
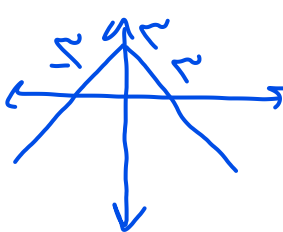
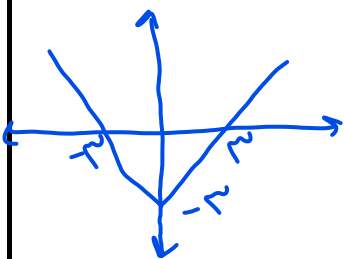
$$K=2 \leftarrow$$

$$y = -f\left(\frac{x}{2}\right)$$

$$y = f\left(\frac{x}{2}\right)$$

$$y = f(x)$$

$$y = f(x-1)$$

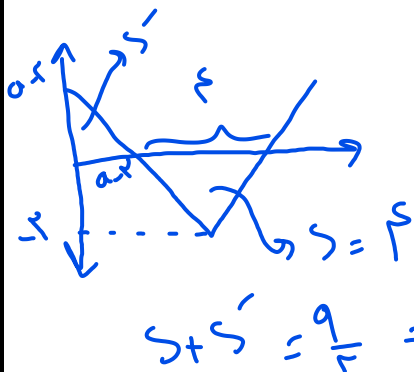


$$\left(\frac{a-2}{2}\right)^2 = \frac{1}{2} \Rightarrow a=2 \checkmark$$

$$a=1 \text{ غلط}$$

$$f(x) = |x-2| - 2 \quad (2)$$

$$f\left(\frac{1}{2}\right) = \left|\frac{1}{2}-2\right| - 2 = \frac{5}{2}$$



$$S+S' = \frac{9}{2} \Rightarrow S' = \frac{1}{2}$$