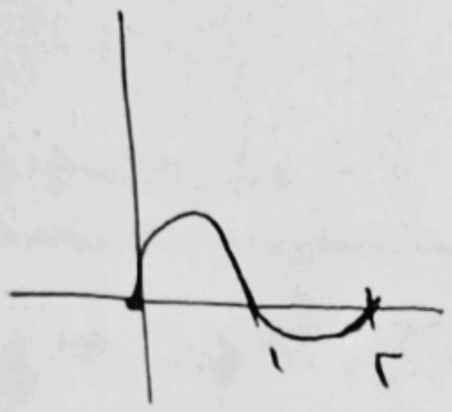
(۴

$f(2x-1) \Rightarrow$ 

$\sqrt{-(x+2)f(2x-1)}$

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

$\Rightarrow (x+2)f(2x-1) \leq 0$

	-2		1		2
	$-$	$+$	$-$	$+$	

$\Rightarrow D_f = (-\infty, -2] \cup [0, 1]$

(۷

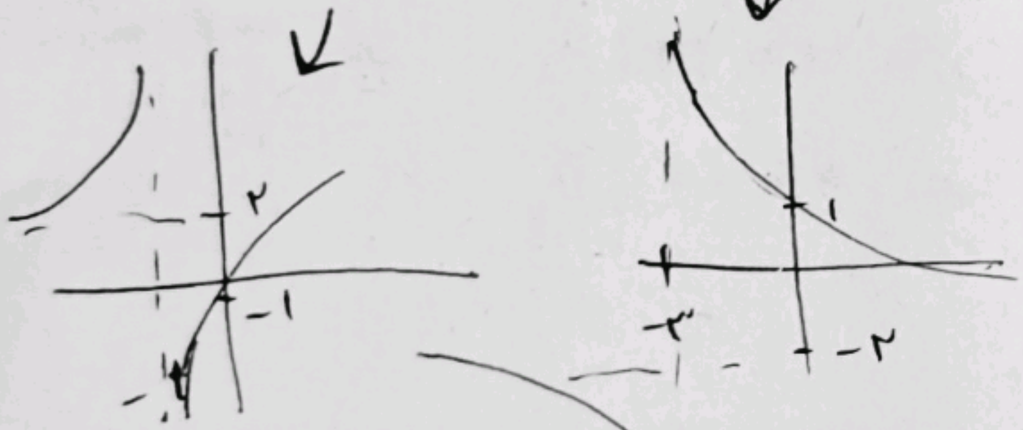
$f(x) = |2x-3|+1 \longrightarrow g(x) = |2(x+k)-3|+|-2$

$\xrightarrow{x=0} |-3|+1 = |2k-3|-2 \Rightarrow 4+2 = |2k-3| \Rightarrow 6 = |2k-3|$

$\Rightarrow \begin{matrix} 6 = 2k-3 \\ -6 = 2k-3 \end{matrix} \begin{matrix} \rightarrow k = 4/5 \\ k = -1/5 \end{matrix} \xrightarrow{k>0} \boxed{k = 4/5}$

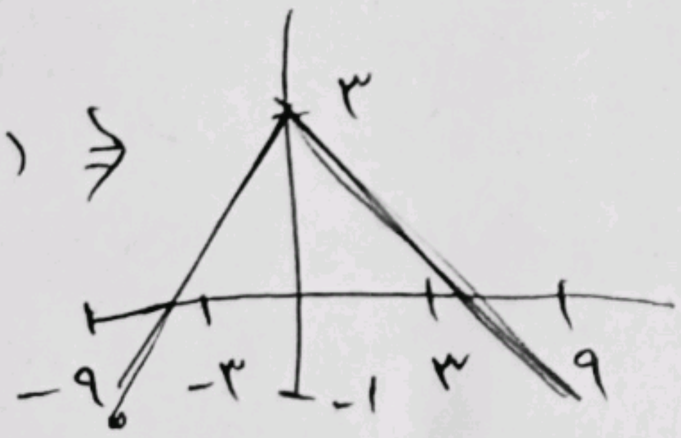
(۸

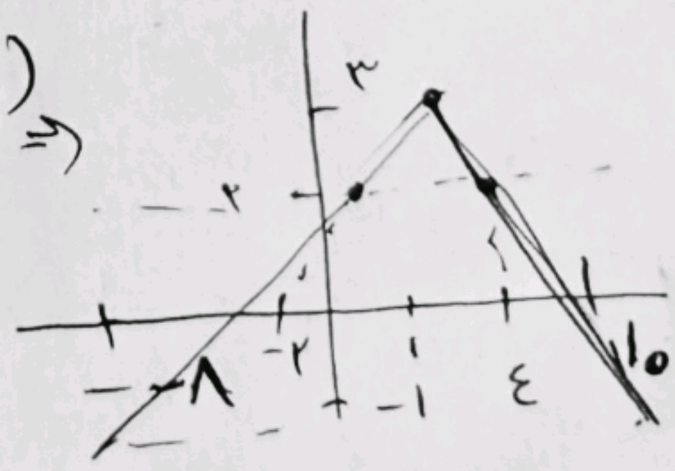
$f(x) = \dfrac{2x-1}{x+1}$, $f'(x) = \dfrac{3-2x}{x+2}$



$\Rightarrow$ واحدی بیشتر بالا

(۹

$f(x) \Rightarrow$ 

$\Rightarrow f(x-1) \Rightarrow$ 

$\dfrac{6 \times 1}{2} = \boxed{3 = S}$ $\qquad 4-(-2) = 6$

(۱۰

$S = \dfrac{(a-2)^2}{2} + \dfrac{4}{2}\left|a-2-(a+2)\right| \times f(a) = 4/5$

$\left(\dfrac{a-2}{2}\right)^2 = \dfrac{1}{2} \Rightarrow a-2 = 1 \Rightarrow a = 3$

$f\left(\dfrac{1}{a}\right) = \left(\dfrac{1}{3}-3\right|-2 = \boxed{\dfrac{2}{3}}$

خوشسیما جون

دوازدهم ریاضی B ۶،۲۴

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۱) الف) $-4 \leqslant x \leqslant 2 \Rightarrow -14 \leqslant 3x-2 \leqslant 4 \Rightarrow D' = [-14, 4]$

ب) $-4 \leqslant 3x-2 \leqslant -2 \Rightarrow -2 \leqslant 3x \leqslant 0 \Rightarrow -\frac{2}{3} \leqslant x \leqslant 0 \Rightarrow D' = [-\frac{2}{3}, 0]$

$f(x) = x + \sqrt{x-2} \longrightarrow f'(x) = x - 2 + \sqrt{x-4}$

نقطه برخورد. طول و عرض برابر باشد $\longrightarrow$ $x - 2 + \sqrt{x-4} = x \Rightarrow 4 = x - 4 \Rightarrow x = 8$

$A \begin{vmatrix} 8 \\ 8 \end{vmatrix} \Rightarrow y' = 8$

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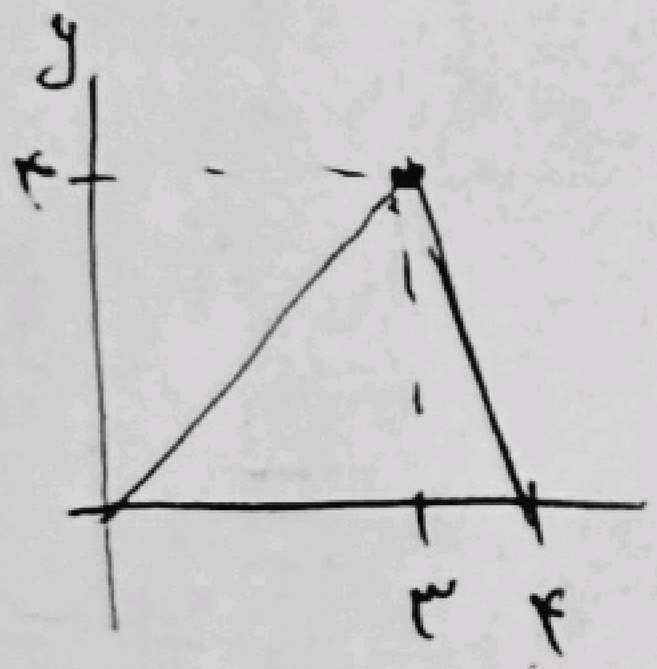
۳)

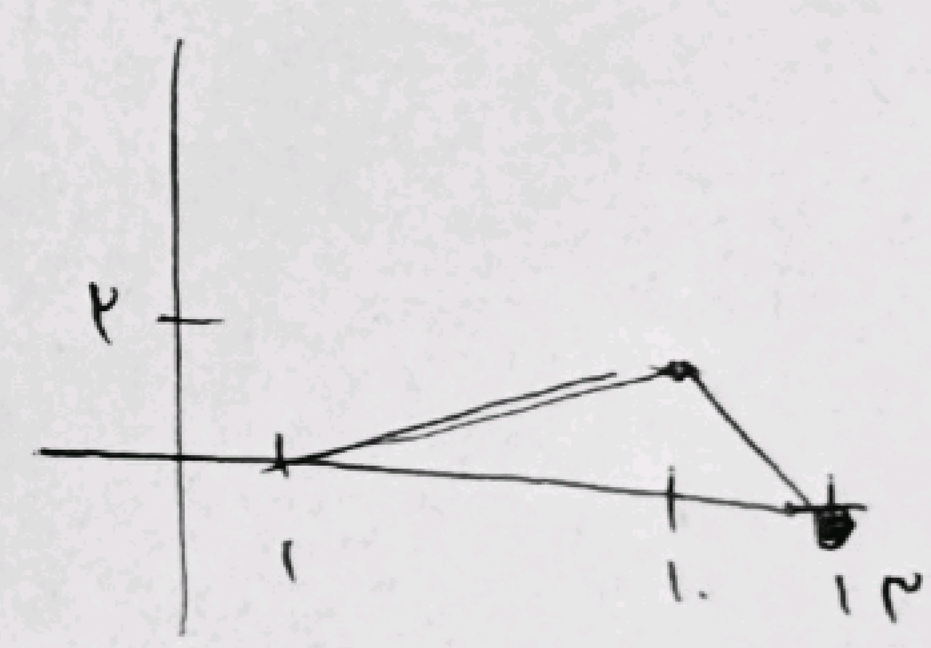


$g(x) = 2f(3x+1)$

$g(3) = 4 \Rightarrow f(10) = 2$

$g(4) = 0 \Rightarrow f(13) = 0$

$g(0) = 0 \Rightarrow f(1) = 0$



$\Rightarrow S = \frac{12 \times 2}{2} = 12$

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۴) $A \begin{vmatrix} 2 \\ -3 \end{vmatrix} \longrightarrow y = a + 2f(\frac{x-a}{2}) \Rightarrow \frac{y-a}{2} = f(\frac{x-a}{2}) \Rightarrow \begin{matrix} x-a=4 \\ y-a=-6 \end{matrix}$

$\Rightarrow \begin{matrix} x = 4+a \\ y = a-6 \end{matrix} \xrightarrow{y=2x-8} a - 6 = 8 + 2a - 8 \Rightarrow \boxed{a = -6}$

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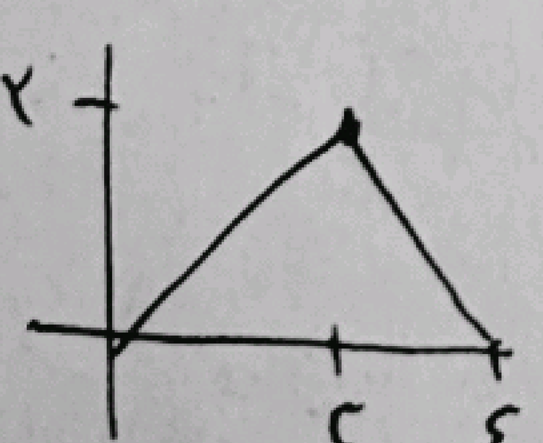
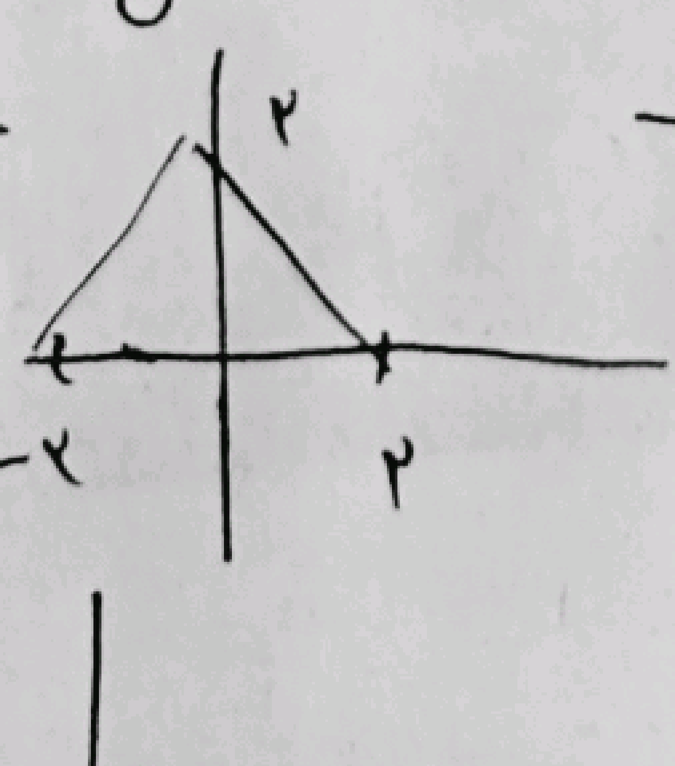
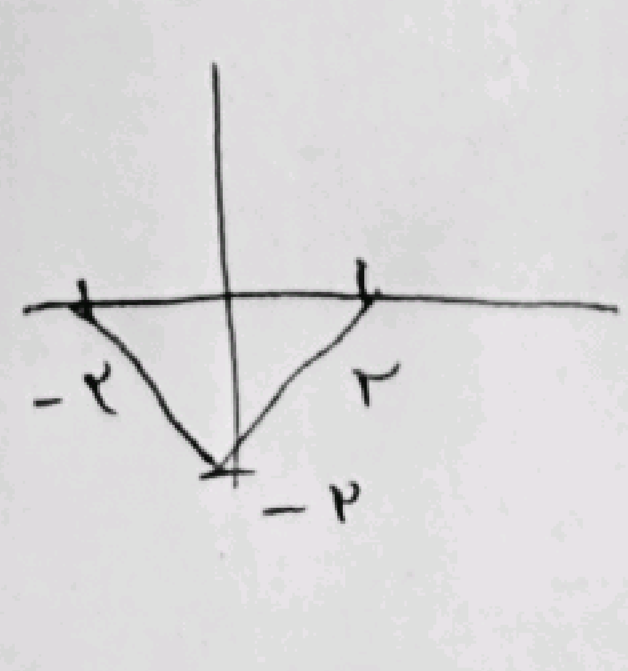
۵) $y = -f(x-2)$



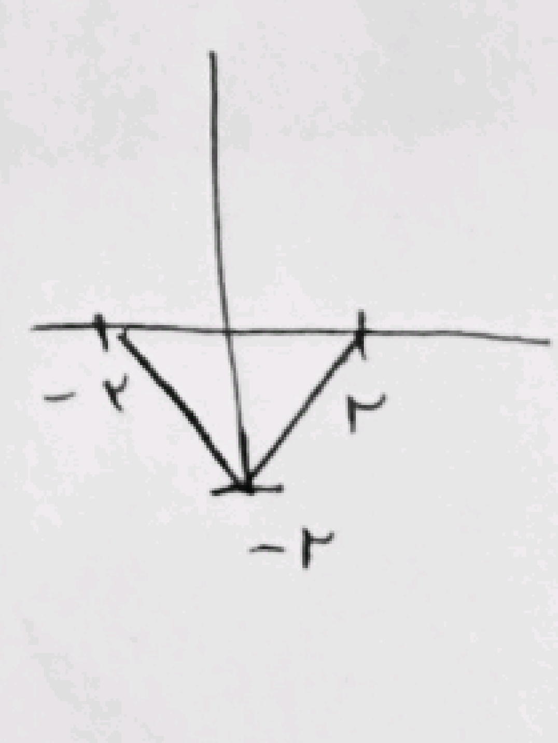
$\longrightarrow$ $y = f(x)$



$\longrightarrow$ $y = f(x)$



$\longrightarrow$ $y = f(-x)$



شکل نهایی $\longleftarrow$

$y = \frac{1}{2} f(-x+4)$