

نام و نام خانوادگی: پاسخنامه تشریحی تکلیف شماره ... کلاس:
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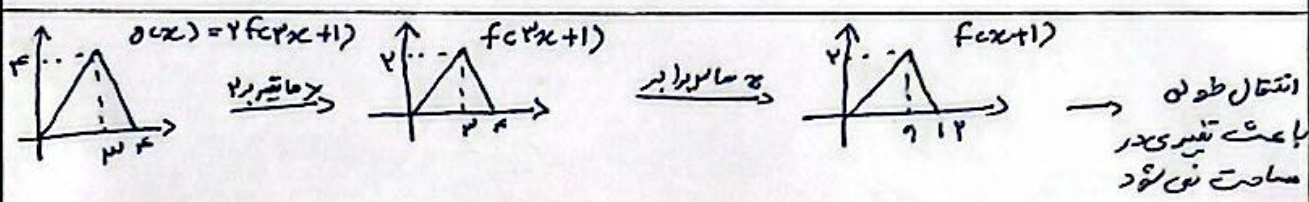
$$الف) -4 \leq 3x-2 \leq 2 \xrightarrow{+2} -2 \leq 3x \leq 4 \xrightarrow{\div 3} -\frac{2}{3} \leq x \leq \frac{4}{3}$$

$$ب) -4 \leq 3x-2 \leq -2 \xrightarrow{+2} -2 \leq 3x \leq 0 \xrightarrow{\div 3} -\frac{2}{3} \leq x \leq 0$$

$$f(x) = x + \sqrt{x-2} \xrightarrow{\text{دو طرفه}} f(x+2) = x-2 + \sqrt{x-4} \xrightarrow{\text{بهر طرف 2 اضافه کن}} x-2 + \sqrt{x-4} = x$$

$$\xrightarrow{\text{طرفین را از هم کم کن}} x = x \rightarrow x-2 + \sqrt{x-4} = x \rightarrow \sqrt{x-4} = 2 \rightarrow x-4 = 4 \rightarrow x = 8$$

$$x = x \rightarrow 8 = x ; \quad \begin{matrix} \wedge \\ \wedge \end{matrix} \xrightarrow{\text{موضوع}} \quad \text{نقشه برآورد}$$



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

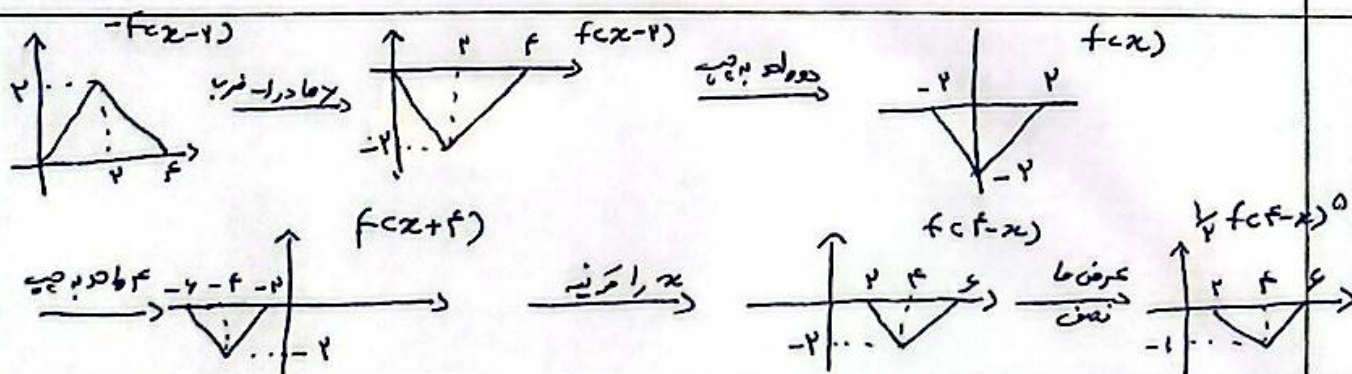
مساحت نه نه

$$f(x) = -3, \quad A'(x, y) \xrightarrow{y=2x-1} A' \mid x-2y=1$$

$$f\left(\frac{x-a}{y}\right) = \frac{y-a}{y} \rightarrow f(x) = \frac{x-a-1-a}{y} = \frac{x-2a-1}{y} = -3$$

$$\begin{cases} 2x-2a=1 \\ x-2a=2 \\ x=4, a=2 \end{cases}$$

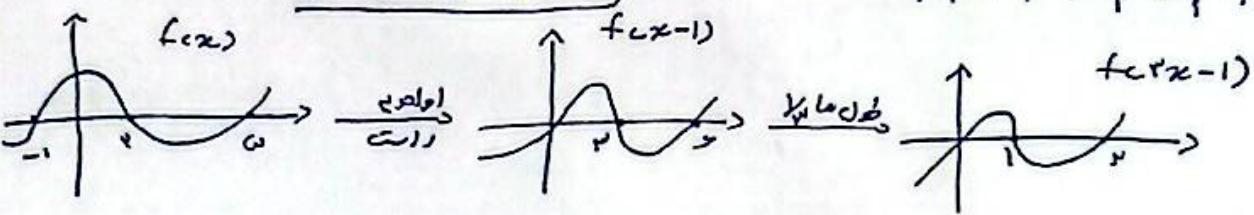
$$y = 2x' - 1 = 2\left(\frac{x-a}{y}\right) - 1 = \frac{x-a-1}{y}, \quad \frac{x-a}{y} = 2 \rightarrow x-a = 2y \rightarrow 2x-2a=1$$



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

$$D_f = [-2, 0] \cup [1, 2] \quad \text{تعیین علامت}$$

$$\begin{array}{ccccccc} -2 & 0 & 1 & 2 \\ + & - & + & - & + \end{array}$$



$$|2x-3|+1 \xrightarrow{\text{طول مایه}} |2(x+k)-3|+1 \xrightarrow{\text{بهره یابی}} |2(x+k)-3|-2 = g(x)$$

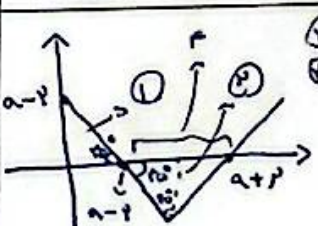
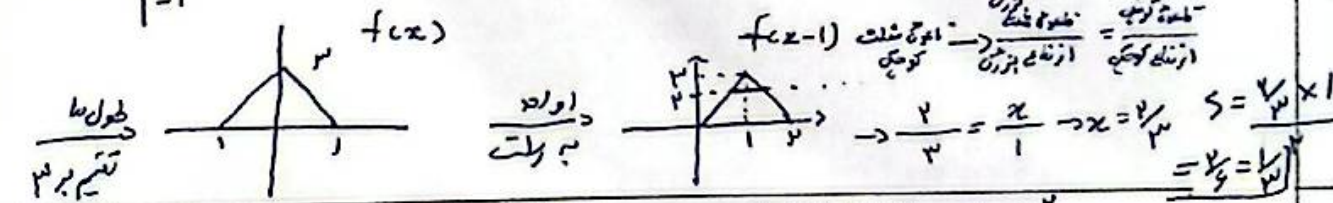
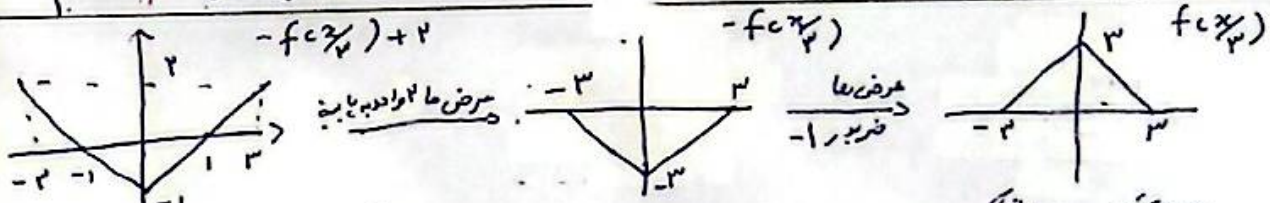
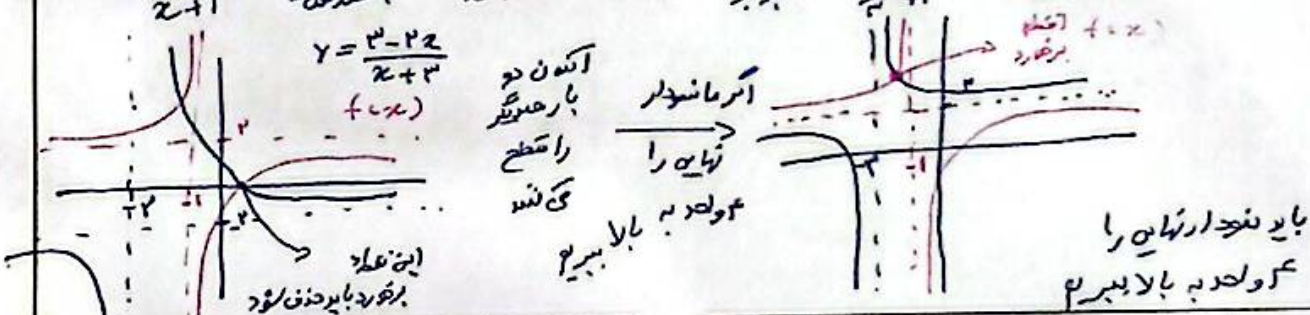
حل بر فرض $\rightarrow x=0 \rightarrow |2k-3|-2 = 4 \rightarrow |2k-3| = 6$

روی محور x

$$\begin{aligned} + & \rightarrow 2k-3 = 6 \rightarrow 2k = 9 \rightarrow k = 4.5 \\ - & \rightarrow 2k-3 = -6 \rightarrow 2k = -3 \rightarrow k = -1.5 \end{aligned}$$

$k = 4.5$

$$f(x) = \frac{2x-1}{x+1} \xrightarrow{\text{تقسیم}} \frac{2x-1}{x+1} = \frac{1-2x}{x+1} \xrightarrow{\text{طول مایه}} \frac{1-\frac{1}{2}x}{\frac{1}{2}x+1} = \frac{2-2x}{x+2}$$



$$\begin{aligned} S_{\text{کل}} &= a+2-a+2 = 4 \\ S_{\text{ارتفاع}} &= \frac{ab}{2} = \frac{4}{2} = 2 \\ S_{\text{کل}} &= \frac{(a-2)(a-2)}{2} = \frac{a^2-4a+4}{2} = \frac{a^2+f-4a}{2} \\ S_{\text{کل}} &= \frac{4 \times 2}{2} = \frac{8}{2} = 4 \end{aligned}$$

$$S_{\text{کل}} + S_{\text{ارتفاع}} = \frac{4}{2} \rightarrow \frac{a^2+f-4a}{2} + \frac{4}{2} = \frac{4}{2} \rightarrow a^2+f-4a+4 = 4 \rightarrow a^2-4a+2 = 0 \rightarrow (a-1)(a-3) = 0$$

$$\begin{aligned} \rightarrow a &= 1 \times a-2 > 0 \rightarrow a=1 \text{ صحیح} \quad f(x) = |x-3|-2 \\ a &= 3 \checkmark \quad f(x/2) = |\frac{1}{2}-2|-2 = \frac{1}{2}-2 = -\frac{3}{2} \end{aligned}$$