

اینجا از برای
خداوند و حضرت
علیه السلام

۱۸, ۵

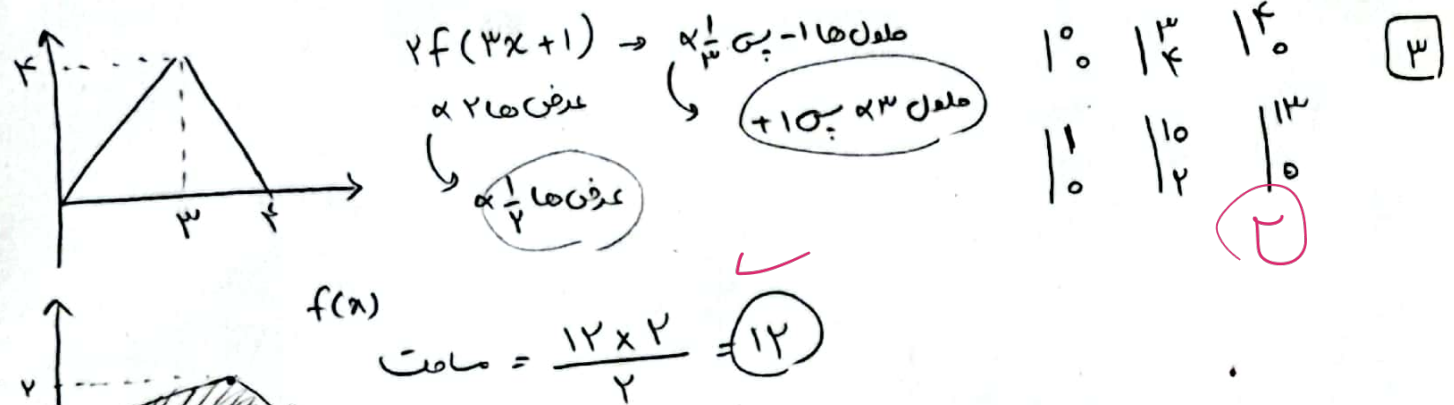
$D \rightarrow f(x) \rightarrow [-4, 2]$ $f(3x-2) \rightarrow [-\frac{2}{3}, \frac{4}{3}]$

1
1.5

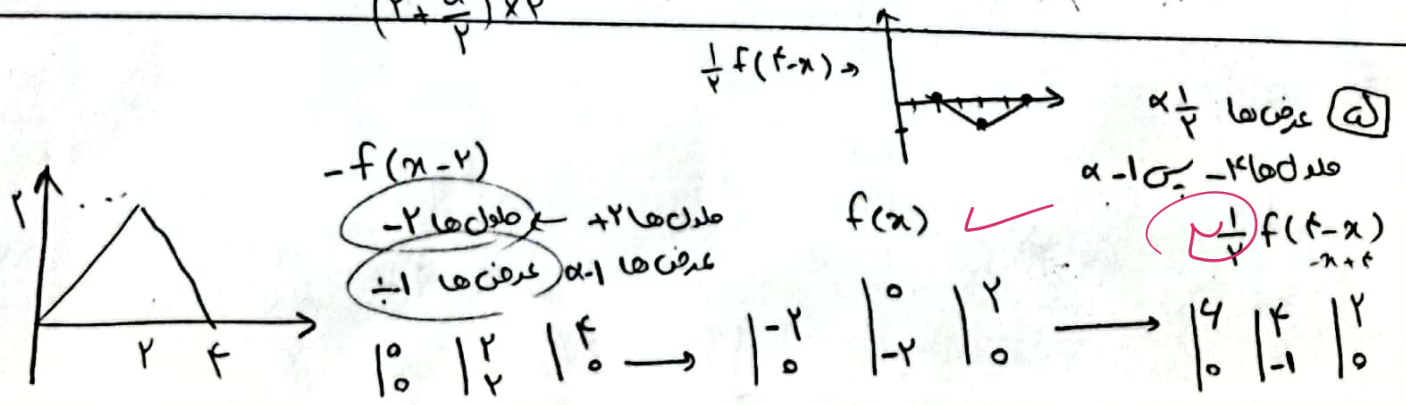
$D \rightarrow f(3x-2) \rightarrow [-4, 2] \rightarrow Df(x) = [-4, 2]$

$-4 \leq x \leq -2 \rightarrow -12 \leq 3x \leq -4$
 $-12 \leq 3x-2 \leq -4$

① $x-2 + \sqrt{(x-2)-2}$ ② جای y را عوض می کنیم $x = y-2 + \sqrt{y-4}$
 ③ $y=x$ $y-2 + \sqrt{y-4} = y$ $\sqrt{y-4} = 2$
 $y-4 = 4$
 $y = 8$



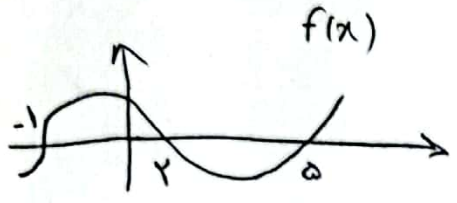
$A = (2, -3)$ $a + 2f(\frac{x-a}{2})$
 $-4 + a = 2x - 4$ $2x - a = 2$
 $(2 + \frac{a}{2}) \times 2$ $x - a = -4$
 $a = -4$



4

$$\sqrt{-(x+2)f(3x-1)}$$

	-2	0	1	2
$-x-2$	+	0	-	-
$f(3x-1)$	-	-	+	0
	-	+	-	+



$f(3x-1)$
 $\alpha \frac{1}{3} \sigma_1 + 1$ مودلو



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

✓

5

$f(x) = |2x-3|+1$ $|2(x+k)-3|+1-3$ $x=0 \leftarrow y$

$g \rightarrow |2x+2k-3|-2 = |2x-3|+1$

$|2k-3|-2 = 3+1$ $|2k-3|=4$

$2k-3=4$ $2k=9$ $k=4.5$

$2k-3=-4$ $2k=-1$ $k=-0.5$

مقدار k را بیابید

✓

6

$f(x) = \frac{2x-1}{x+1}$ x تغییرات

① $\rightarrow -\frac{2x-1}{x+1} \xrightarrow{\text{مخرج را } x^3 \text{ ضرب کن}} \frac{-2(\frac{x}{3})+1}{\frac{x}{3}+1}$

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

$\frac{x}{3}+1$

داده به دست می آید

✓

7

$-f(\frac{x}{3})+2$ $f(x-1)+1$

مقدار x را بیابید

$\frac{-1}{3}$ $\frac{1}{3}$

$\frac{-1}{3}$ $\frac{1}{3}$

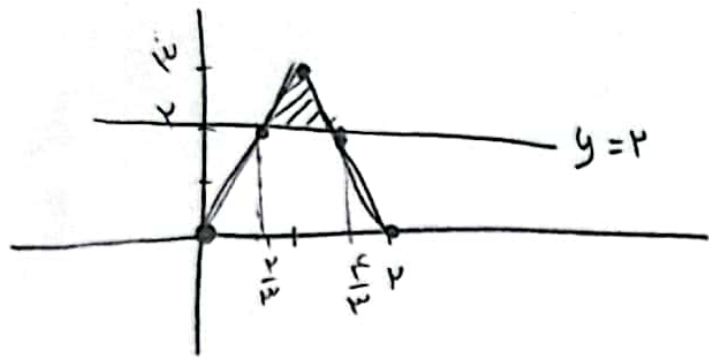
$\frac{-1}{3}$ $\frac{1}{3}$

$\frac{-1}{3}$ $\frac{1}{3}$

$\frac{-1}{3}$ $\frac{1}{3}$

ادامه صفحه بعدی

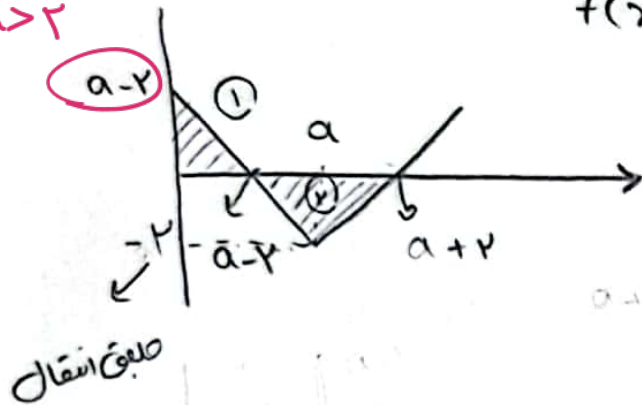
ادام سوال 9



$$\frac{1 \times \frac{1}{2}}{\frac{1}{2}} = \frac{1}{2} \quad \left(\frac{1}{2} \right)$$

$$\frac{1}{2} - \frac{1}{2} = \frac{1}{2} \quad \checkmark$$

$a > r$



$$f(x) = |x - a| - r$$

$$\frac{(a-r)(a-r)}{r} = \frac{a^2 - r}{r} = \frac{1}{r}$$

$$\frac{r \times r}{r} = (r)$$

$$\frac{a}{r} - r = \frac{1}{r}$$

$$a^2 - r = 1$$

$$a^2 = a$$

$$a = \pm \sqrt{a} \quad \text{منفی قابل قبول نیست}$$

$$a = \sqrt{a} \quad \text{قابل قبول}$$

$$f\left(\frac{1}{\sqrt{a}}\right) = \left|\frac{1}{\sqrt{a}} - \sqrt{a}\right| - r$$

$$\frac{1 - a}{\sqrt{a}} \quad \left| -\frac{r}{\sqrt{a}} \right| = \frac{r}{\sqrt{a}} - r$$

$$\frac{r\sqrt{a}}{a} - \frac{10}{a}$$

$$\left(\frac{r\sqrt{a} - 10}{a} \right)$$

$$\frac{(a-r)^2}{r} + \frac{r(a+r) - (a-r)}{r} = \frac{9}{1}$$

$$\rightarrow (a-r)^2 = 1 \quad \begin{matrix} \nearrow a \geq r \checkmark \\ \searrow a \leq 1 \times \end{matrix}$$

$$f\left(\frac{1}{r}\right) = \frac{r}{r}$$