

نام و نام خانوادگی پاسنامه تشریحی تکلیف شماره ... کلاس ... (دانشه) ...

الف) $-4 \leq x \leq 2 \xrightarrow{\times 3} -12 \leq 3x \leq 6 \xrightarrow{-2} -14 \leq 3x-2 \leq 4$

$D_{f(3x-2)} \Rightarrow [-14, 4] \xrightarrow{-2} -12 \leq 3x \leq 6 \xrightarrow{\div 3} -4 \leq x \leq 2 \rightarrow D_f = [-4, 2]$

ب) $-2 \leq x \leq 2 \xrightarrow{\times 3} -6 \leq 3x \leq 6 \xrightarrow{-2} -8 \leq 3x-2 \leq 4$

$\rightarrow D_f = [-8, 4]$ ✓

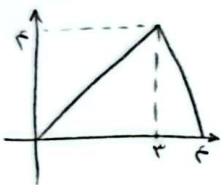
(1)

$n + \sqrt{n-2} \xrightarrow{\text{قرینه‌سازی}} n-2 + \sqrt{n-2} \xrightarrow{\text{تجزیه به دو جمله اول و دوم}} \dots$

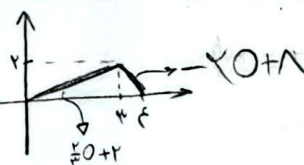
$n-2 + \sqrt{n-2} = 9 \rightarrow \sqrt{n-2} = 7 \rightarrow n-2 = 49 \rightarrow n = 51$

$8-2 + \sqrt{8-2} = 4+2=6$ ✓

(2)

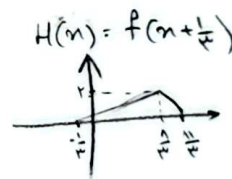


$g(n) = 2f(3n+1)$



$D_g = [1, 3]$

$S = \frac{(1+3)(4)}{2} = 10$ ✓



(1, 10)

$y = f(x) \rightarrow -2 = f(x)$

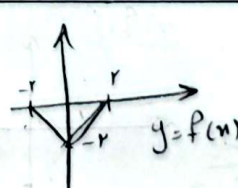
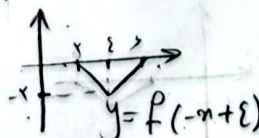
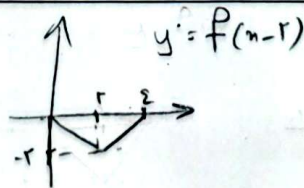
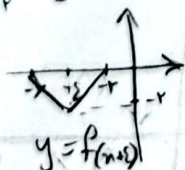
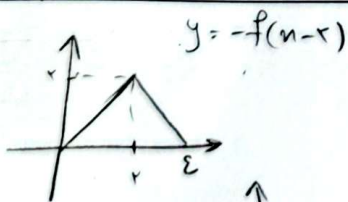
$3n-1 = a + 2f\left(\frac{n-a}{2}\right) \rightarrow f\left(\frac{n-a}{2}\right) = \frac{3n-1-a}{2}$

$\left. \begin{matrix} n-a=4 \\ 3n-a=2 \end{matrix} \right\} \rightarrow n=-2, a=-4$ ✓

$\frac{n-a}{2} = 2 \rightarrow n-a=4$

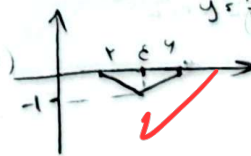
$\frac{3n-1-a}{2} = -2 \rightarrow 3n-a=2$

(2)

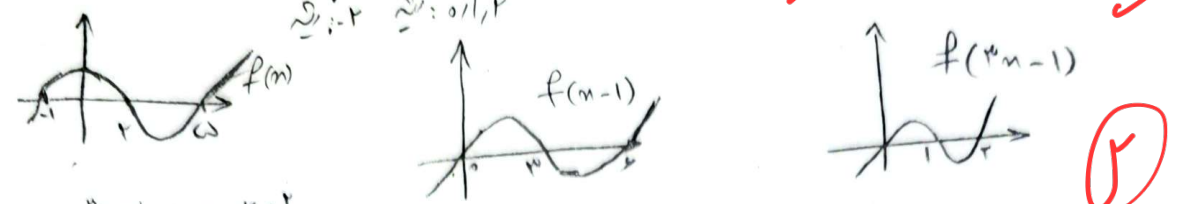
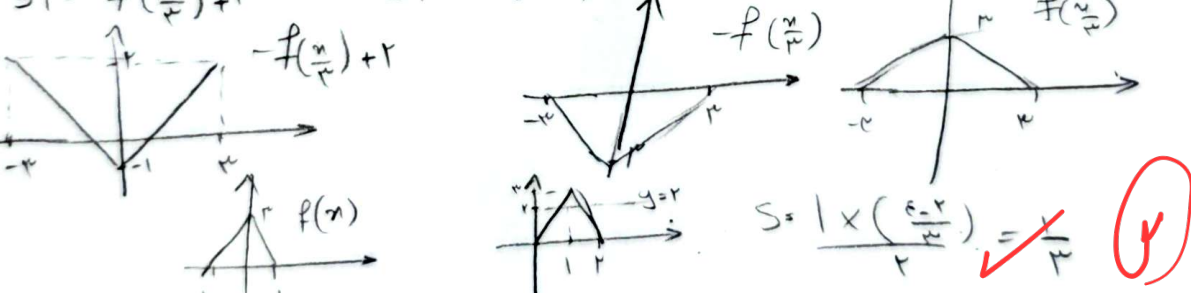
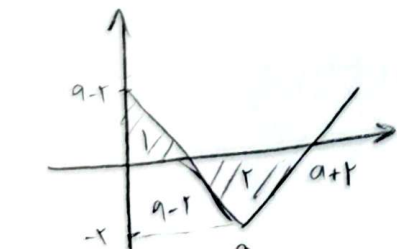


(2)

$y = \frac{1}{2}f\left(\frac{n}{2}\right)$



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$y = \sqrt{-(n+r)f(n-1)}$ $\sum_{i=1}^n f(i) \geq 0$ $\sum_{i=1}^n f(i) = 0, 1, r$  $r_{n-1} = a \rightarrow k = r$ $r_{n-1} = -1 \rightarrow k = 0$ $r_{n-1} = r \rightarrow k = 1$ $D_f = [-r, 0] \cup [1, r]$	6
$f(n) = r_n - r + 1 \xrightarrow{\text{نقطة } K} r(n+k) - r + 1 \xrightarrow{\text{نقطة } r} r(n+k) - r - r$ $\log_{\text{نقطة } r} \rightarrow n=0 \quad g(0) = rk - r - r = f(n) = -r + 1 = 2$ $rk - r - r = \varepsilon \rightarrow rk - r = \pm \varepsilon \xrightarrow{\text{نقطة } r} rk - r = +\varepsilon$ $k = \frac{r + \varepsilon}{r}$	7
$f(n) = \frac{r_{n-1}}{n+1} \xrightarrow{\text{نقطة } r} -\frac{(r_{n-1})}{n+1} \xrightarrow{\frac{1}{r}n} -\frac{(\frac{r}{r}n-1)}{\frac{n}{r}+1} \Rightarrow \frac{r-r_n}{n+r}$ $g(n) = \frac{r-r_n}{n+r} + K \quad \boxed{K=f}$ $\frac{r-r_n}{n+r} + K = \frac{r_{n-1}}{n+1} \rightarrow (K-r)r + r_{n-1} + rK + r$	8
$y_1 = -f(\frac{n}{r}) + r \quad y_r = f(n-1)$  $S = 1 \times (\frac{r-r}{r}) = \frac{r}{r}$	9
 $S_1 = \left \frac{(a-r)(a-r)}{r} \right = \frac{(a-r)^2}{r}$ $S_r = \left \frac{((a-r) - (a+r)) \times r}{r} \right = \varepsilon$ $\frac{(a-r)^2}{r} + \varepsilon = \frac{a}{r} \rightarrow a^2 - \varepsilon a + \varepsilon = 1 \rightarrow a = r$ $f(n) = n-r - r \rightarrow f(\frac{1}{r}) = \frac{1}{r} - r - r = (\frac{r}{r})$	10