

۱۴, ۷۵

نام و نام خانوادگی: یوسف محمدیان

پاسخنامه تشریحی تکلیف شماره کلاس

$$f(n) = \frac{2n-1}{3} \quad \begin{cases} f^{-1}(0) = \frac{1}{3} \\ f^{-1}(n) = 0 \Rightarrow n = -\frac{1}{3} \end{cases} \Rightarrow \int = \frac{1}{3} \times \frac{1}{3} = \frac{1}{9} \checkmark$$

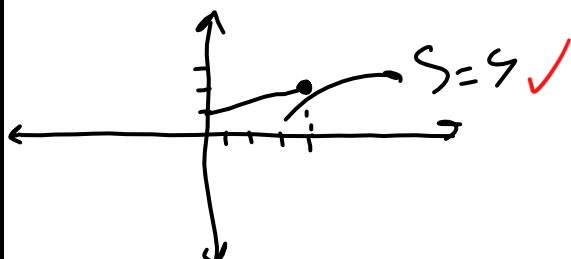
داریم $\Rightarrow y = 1 + \sqrt{n-2}$ $\checkmark$ $n \geq 3$ $y \geq 4$ $\checkmark$

$R_f = D_{f^{-1}}$

$R_f = [0, +\infty) \Rightarrow D_{f^{-1}} = [4, +\infty)$

الف $y = (n-1)^2 + 2$
 $n = 1 + \sqrt{y-2}$
 داریم $y = 1 + \sqrt{n-2}$ $\checkmark$
 $D_{f^{-1}} \in [2, +\infty)$

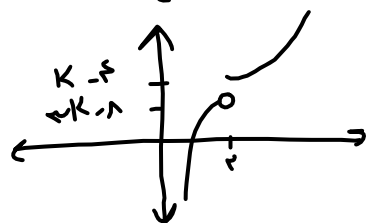
$f(n) = 2n - 2|n-1| \xrightarrow{n \leq 1} y = 2n - 2$ داریم $\Rightarrow f^{-1}(n) = \frac{1}{2}n + 1$ $n \leq 1$



$y = \frac{n}{\sqrt{n^2-2}} \Rightarrow y^2 = \frac{n^2}{n^2-2} \Rightarrow n = \pm \sqrt{\frac{2y^2}{y^2-1}}$
 داریم $\Rightarrow n = \sqrt{\frac{2y^2}{y^2-1}}$ $\checkmark$

$\Rightarrow \frac{n_1^2}{n_1^2-2} = \frac{n_2^2}{n_2^2-2} \Rightarrow n_1^2 n_2^2 - 2n_1^2 = n_2^2 n_1^2 - 2n_2^2$
 $\Rightarrow n_1^2 = n_2^2 \Rightarrow n_1 = \pm n_2$
 ولی از آنجایی که تابع فرد است $\Rightarrow n_1 = -n_2$ $\checkmark$

$g(x) = \begin{cases} x^2 - 4x + K = (x-2)^2 + K - 4 & x \geq 2 \\ -x^2 + 4x + 3K = -(x-2)^2 + 3K + 4 & x < 2 \end{cases}$



$K-4 \geq 3K+4 \Rightarrow -\frac{1}{2} \geq 2K \Rightarrow K \leq -4$
 دقت!

$$f(n) = \begin{cases} 5n & n \geq 0 \\ n & n < 0 \end{cases} \Rightarrow f^{-1}(n) = \begin{cases} \frac{1}{5}n & n \geq 0 \\ \frac{1}{3}n & n < 0 \end{cases}$$

$$\Rightarrow a+b = \frac{1}{r} \Rightarrow a = \frac{r}{\lambda} \checkmark \rightarrow ab = -\frac{r}{4r}$$

$$a-b = \frac{1}{r} \quad b = -\frac{1}{\lambda} \checkmark$$

$$\ell(r) = -16 \Rightarrow \frac{r_x r + r}{n+m} = -16 \Rightarrow m = -r \Rightarrow \ell(n) = \frac{r n + r}{n-r} \Rightarrow \ell = \ell^{-1}$$

$$n = f_0 f^{-1}(n) + f^{-1}(n)$$

$$n = n + f(n) \Rightarrow f(n) = 0 \Rightarrow \frac{n+1}{n-2} = 0 \Rightarrow n = -\frac{1}{2} \quad \checkmark$$

$$f(r, u) = t \xrightarrow[\text{ازدواج}]{f^{-1}} r, u = f^{-1}(t) \rightarrow u = \frac{r - f^{-1}(t)}{r}$$

$$g\left(\frac{u}{r}\right) = r - t \xrightarrow[\text{ازدواج}]{g^{-1}} \frac{u}{r} = g^{-1}(r - t) \rightarrow u = r g^{-1}(r - t)$$

$$g\left(\frac{x}{r}\right) = r - t \quad \xrightarrow[\text{از دو طرف}]{g^{-1}} \quad \frac{x}{r} = g^{-1}(r - t) \rightarrow x = r g^{-1}(r - t)$$

$$\frac{r - f^{-1}(t)}{r} = r g^{-1}(r - t) \xrightarrow{t = -r} r - f^{-1}(-r) = r g^{-1}(r) \xrightarrow{\text{جواب}}$$

$$y = \frac{2n-3}{1-n} \xrightarrow{\text{تقسيم على } -1} \bar{y} = \frac{2n+3}{1+n} \xrightarrow{\text{انقلاب}} y = \frac{2n+9}{n-1} \quad \checkmark$$

$$\mathcal{L}^{-1}(n) = \frac{+n+5}{n-2}$$

$$u^2 - 2u - 4 = 0 \rightarrow S = \frac{-b}{a} = \underline{2}$$

$$\rho^{-1}(n) = \rho(n) \Rightarrow \frac{n+9}{n-1} = \frac{n+9}{n-9} \Rightarrow \cancel{n+9} \cdot \cancel{n-1} \Rightarrow \frac{d\theta}{d\omega} = -\frac{1}{2}$$

$$y = n + \xi[n]$$

$$[n] = \frac{\partial}{\partial x} n - \frac{\partial}{\partial x} y$$

$$\Rightarrow f - g(n)$$

$$[y] = [n]^S[n]$$

$$\frac{\omega}{\pi} y = \frac{\omega}{\pi} n - [n]$$

$$= n + \frac{s}{2} [n] - n + \frac{s}{2} [n]$$

$$g(n) = y = n - \frac{s}{2}[n]$$

$$= \frac{r_s}{\rho} [n] \quad \checkmark$$

$$[y] = \omega [n]$$

$$[y] = \Delta \left(\frac{y-n}{r} \right) \quad \text{وأيضا } [n] = \frac{\Delta(n-y)}{r}$$

$$[y] = \Delta \left(\frac{y-n}{f} \right)$$