

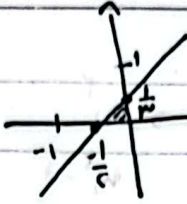


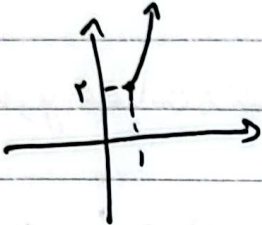
۱۹, ۲۵ آفرین

به نام خدا

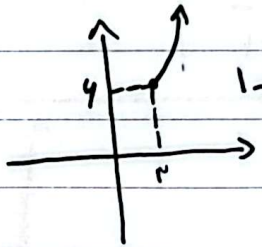
پویا انگلیان

DATE / / SUBJECT:

$\frac{y+4}{2} = u \rightarrow f^{-1}(u) = \frac{2u+1}{2} \rightarrow$

 $S = \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2}$

الف) 
 $\sqrt{1-1} \rightarrow y = (x-1)^2 + 2 \rightarrow \sqrt{y-2} = |x-1| \rightarrow$

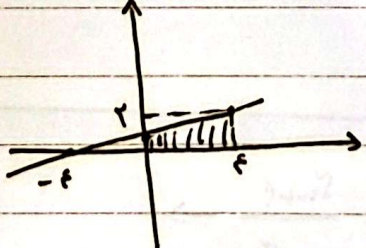
$x = \sqrt{y-2} + 1 \rightarrow f^{-1}(u) = \sqrt{y-2} + 1 ; D_{f^{-1}} = [2, +\infty)$

$\rightarrow y = x^2 - 2x + 5$

 $\sqrt{1-1} \rightarrow y = (x-1)^2 + 2 \rightarrow$

$\sqrt{y-2} + 1 = x \rightarrow f^{-1}(u) = \sqrt{y-2} + 1 ; D_{f^{-1}} = [2, +\infty)$

$f(x) = 14x^2 - 14x + 7 ; f(x) = (x-1/2)^2 + 3/2 \rightarrow f(x) = (x-1/2)^2 + 3/2 \rightarrow$

$f(x) = \begin{cases} x & x \geq 1/2 \\ 1-x & x < 1/2 \end{cases}$
 $\rightarrow f^{-1}(u) = \frac{u+1}{2} ; D_{f^{-1}} = (-\infty, 1]$


 $S = \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2}$

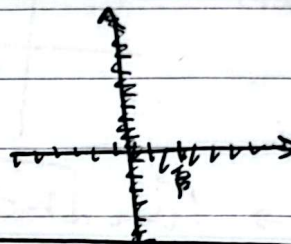
$$\begin{aligned} (u_1, y) &\rightarrow \frac{u_1}{\sqrt{u_1^2 - d}} \cdot \frac{u_r}{\sqrt{u_r^2 - d}} \rightarrow \frac{u_1^r}{u_1^2 - d} \cdot \frac{u_r^r}{u_r^2 - d} \rightarrow \frac{u_1^r u_r^r - d u_1^r}{u_r^2 u_1^r - d u_r^r} \end{aligned} \quad (5)$$

→ $u_1^r u_r^r \rightarrow u_1 \pm u_r \rightarrow$ می‌دانیم u, y هم‌کالت هستند، پس مقادیر 0

$$y^r \cdot \frac{u^r}{u^2 - d} \rightarrow y^r u^r - d y^r u^r \rightarrow u^r \frac{dy^r}{y^r - 1} \rightarrow \dots \leftarrow u_1, u_r, u_r$$

$$h = \frac{\sqrt{d} y}{\sqrt{y^2 - 1}} \rightarrow f^{-1}(u) = \frac{\sqrt{d} u}{\sqrt{u^2 - 1}}$$

$$-f+k \geq 1+rk \rightarrow k \leq -7 \quad (6)$$



$$f(u) = \begin{cases} f_m & u \geq 0 \\ \frac{u}{f} & u < 0 \end{cases} \rightarrow f^{-1}(u) = \begin{cases} \frac{u}{f} & u \geq 0 \\ \frac{u}{f} & u < 0 \end{cases} \quad (7)$$

و در $a+b = \frac{1}{f}$
 $a-b = \frac{1}{f} \rightarrow a = \frac{c}{2}, b = -\frac{1}{2}$

$$\rightarrow a+b = \frac{1}{f}, a-b = \frac{1}{f} \rightarrow \frac{2a}{1} = \frac{1}{f} \rightarrow a = \frac{1}{2f}, b = -\frac{1}{2f}$$

$$ab = \frac{-1}{(2f)^2} \quad a = \frac{\frac{1}{2f} + \frac{1}{f}}{2} = \frac{3}{4f}, b = \frac{\frac{1}{2f} - \frac{1}{f}}{2} = -\frac{1}{4f} \quad ab = -\frac{1}{4f^2}$$

$$f(x) = \frac{1}{x+m} \rightarrow m = -r \rightarrow f(x) = \frac{r+x}{x-r} \rightarrow \quad (8)$$

$$f^{-1}(u) = \frac{r+u}{u-r}, f^{-1}(u) = u; u \in \mathbb{R} \setminus \{r\} \rightarrow u = \frac{r+f}{u-r} \rightarrow$$

$$n + \frac{r_{n+1}}{n-r} \rightarrow n \rightarrow \frac{r_{n+1}}{n-r} \rightarrow 0 \rightarrow n, \frac{-f}{r} \rightarrow$$

ادامه سوال ۷

$$R_f = IR - \{r\} \rightarrow \boxed{n = \frac{-f}{r} \text{ و } \delta}$$

$$f(r-r_n) = r - g(\frac{r}{r}) = t \rightarrow f(t), r-r_n \rightarrow n = \frac{r-f(t)}{r}$$

۱

$$\rightarrow g^{-1}(r-t) = \frac{n}{r} \rightarrow n = rg^{-1}(r-t)$$

۲

$$fg^{-1}(r-t) = r - f(t) \rightarrow fg^{-1}(r) = r - f(t-r) \rightarrow fg^{-1}(r) + f(t-r) = r$$

$$\text{قرین نوبت به بالا} \rightarrow y = \frac{r_{n+1}}{1+r} \rightarrow \text{و اول انتقال} \rightarrow y = \frac{r_{n+1}}{n-1} \rightarrow$$

۹

$$\text{و اول انتقال به بالا} \rightarrow y = \frac{r_{n+1}}{n-1} - r = \frac{r_{n+1}}{n-1} = f(n) \rightarrow$$

۲

$$\frac{r_{n+1}}{n-1} \rightarrow n \rightarrow n^r - n = r_{n+1} \rightarrow n^r - r_{n+1} = 0 \rightarrow \text{و اول انتقال به بالا} \rightarrow$$

$$y = n + \epsilon[n] \rightarrow [y] = \delta[n] \rightarrow [n] = \frac{[y]}{\delta} \rightarrow$$

۱۰

$$y - \frac{f}{\delta}[y] = n \rightarrow f[n] = n - \frac{f}{\delta}[n] \rightarrow f(n) - y(n) =$$

۲

$$n + \epsilon[n] - n + \frac{f}{\delta}[n] = \frac{f}{\delta}[n]$$