

السبيل المبرك

$$\textcircled{\text{الف}} f(n) = [-4, 2] \rightarrow f(3n-2) \rightarrow -4 < 3n-2 < 2 \quad -2 < 3n < 4 \quad \textcircled{1}$$

$$-\frac{2}{3} < n < \frac{4}{3} \rightarrow \underline{DF = \left[-\frac{2}{3}, \frac{4}{3}\right]}$$

$$\textcircled{\text{ب}} Df(xu, y) = [-x, -y] \quad Df = ?$$

①

جائزہ

$$x(-x) - y = \boxed{-1x} \quad -y(x) - y = \boxed{-1y}$$

$$Df = [-1x, -1y]$$

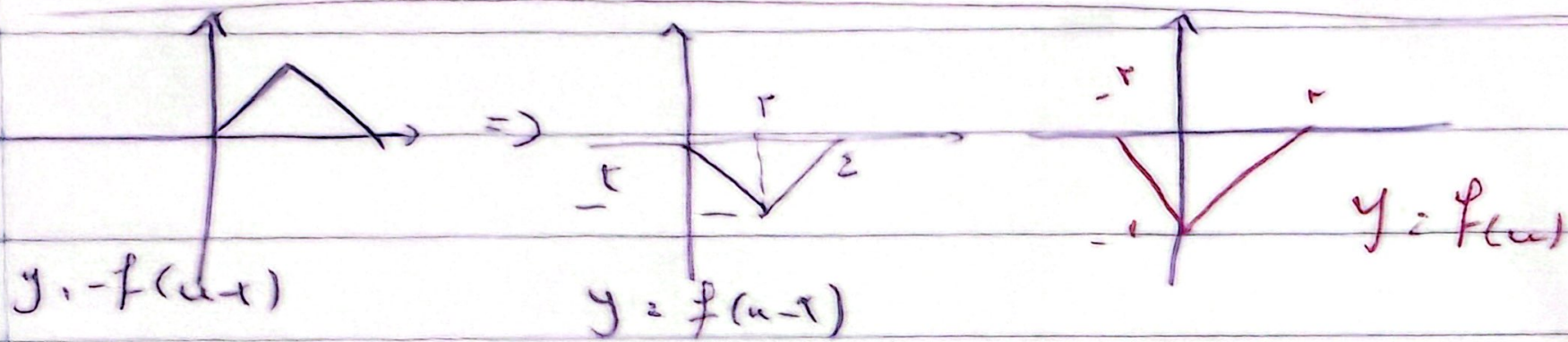
② $f(u) = u + \sqrt{u-2} \xrightarrow[\text{است}]{\text{۲ ماهر}} f'(u) = 1 + \frac{1}{2\sqrt{u-2}}$ نسبت به نیاز اول و دوم مقیدند

مارون تابع $f^{-1}(u)$ نیاز به نیاز اول و دوم مقیدند $\Rightarrow$ هر تابع مارون خودش مارون است و برعکس $\Rightarrow$ نیاز به نیاز اول و دوم مقیدند

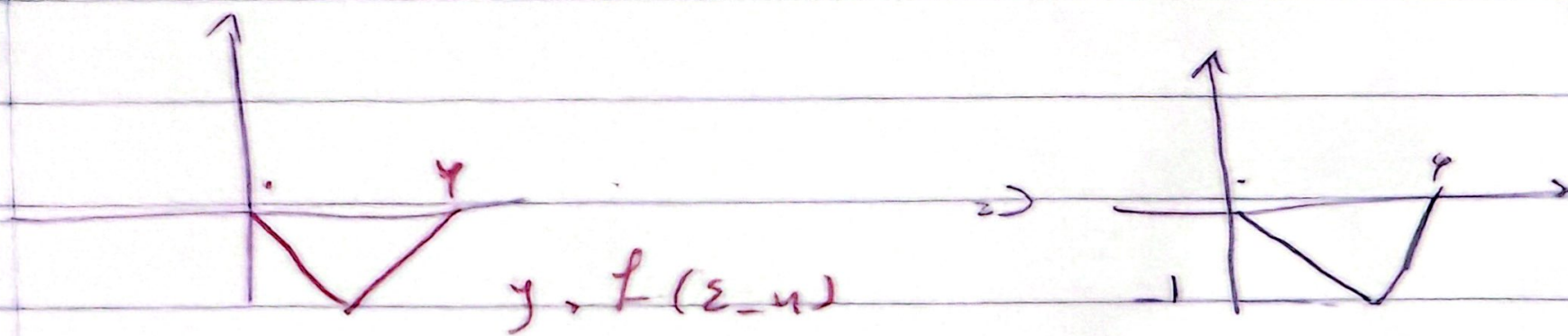
نیاز به نیاز اول و دوم مقیدند $\Rightarrow$ $x + \sqrt{x-4} - 2 = x$
 $\sqrt{x-4} = 2 \quad x-4 = 4$
 $x = 8$ جایگزینی
 $f(8) = 8 + \sqrt{8-2} = 8 + 2 = 10$ پس $f^{-1}(10) = 8$ نیاز به نیاز اول و دوم مقیدند

③ $g(u) = 2f(2u+1) \quad Dg = [0, 4] \quad Rg = [0, 4]$
 $Df = \{0, 1\} \quad Dg = \{0, 1\}$
 $Df = \{0, 1\} \Rightarrow 2(0)+1 = 1 \quad 2(1)+1 = 3$
 $Rf = \{0, 2\} \Rightarrow \frac{Rg}{2} = \{0, 1\}$
 $\frac{12 \times 2}{2} = 12$

④ $A = (2, -3) \rightarrow y = a + 2f\left(\frac{u-a}{2}\right)$
 $u = a \Rightarrow \frac{u-a}{2} = 0 \Rightarrow u = a$
 $y = a + 2f\left(\frac{u-a}{2}\right) = a + 2f(0) = a + 2(-3) = a - 6$
 $y' = 2(u') = 1 \Rightarrow a - 6 = 1 + 2a - 6 \Rightarrow a = -4$



⑤



sam

$$Dy = \sqrt{-(u+r) f(ru-1)}$$

$$-1, r, \omega = f \text{ گنجینه ۳} \quad (4)$$

$$ru-1 = -1 \rightarrow u = \underline{0}$$

$$ru-1 = r \rightarrow u = \frac{r}{r} = 1 \quad ru-1 = \omega \rightarrow u = \underline{r}$$

$$Dy = [-r, 0) \cup [1, r]$$

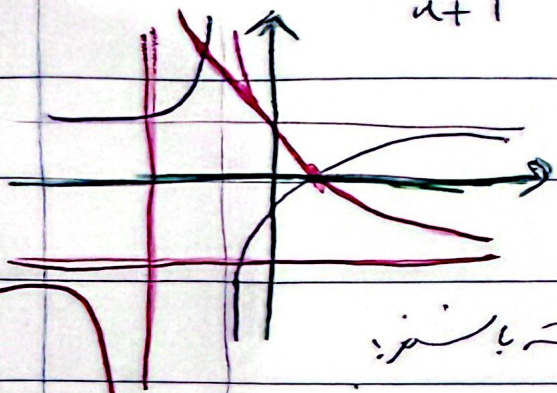
$$f(n) = |ru - r| + 1 \rightarrow |r(u+k) - r| + 1 - r = |ru + rk - r| - r \quad (5)$$

$$|ru + rk - r| - r = |ru - r| + 1 \rightarrow |rk - r| = 4 \quad \begin{matrix} rk - r = 4 \\ \boxed{k = \frac{r+4}{r}} \end{matrix}$$

$$rk - r = -4 \quad \boxed{k = -\frac{r-4}{r}} \quad \alpha$$

$$f(u) = \frac{1-2u}{u+1} \xrightarrow{u \rightarrow \frac{1}{2}} \frac{1-\frac{2u}{r}}{\frac{u}{r}+1} = \frac{r-2u}{u+r} + k$$

(1)

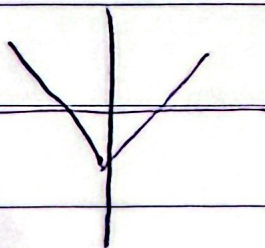


نقطه
محدوده

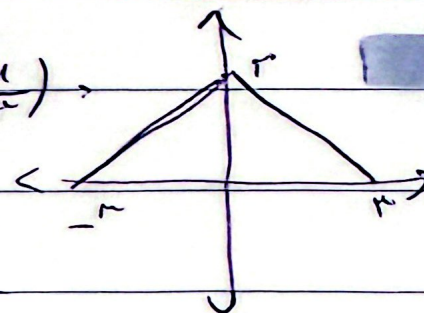
نقطه
محدوده

تا اینجا در مورد تابع با شما

$$y = -f(u/r) + r$$

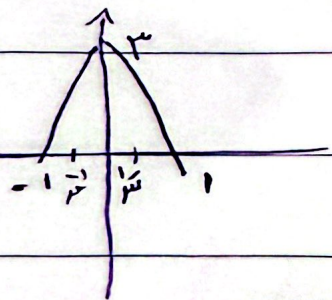


$$y = +f(u/r)$$

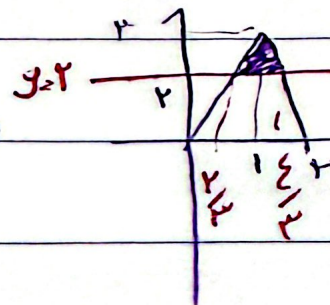


(9)

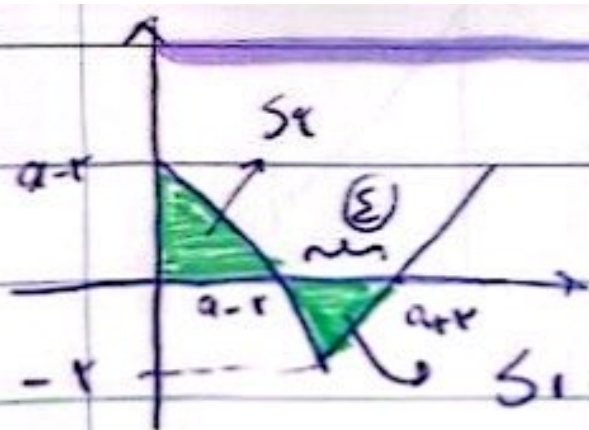
$$f(u)$$



=>



$$\text{So, } \frac{1}{r} \int_{-r}^r f\left(\frac{u}{r}\right) du = \left(\frac{1}{2}\right)$$



$$S_D = \frac{a}{r}$$

10

$$\frac{a}{r} = S_D + S_S \Rightarrow S_S = \frac{1}{r}$$

$$S_1 = \frac{\epsilon \times r}{r} = \epsilon$$

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

$$\begin{cases} a-r=1 \Rightarrow a=r \\ a-r=-1 \Rightarrow a=1 \end{cases}$$

$$f(a) = \left| \frac{1}{r} - r \right| - r = \frac{r}{r^2}$$

$$\bar{a} \in \underline{a}, \underline{a} = \frac{1}{r}$$