

تالیف نمایی

یازدهم پر A

صدا زارعی

① زیر ادیان با هم مقادیر درجه یک باشد یک سمت یک سمت غیر متعادل.

$$a=2$$

$$f(n) = \sqrt{2n+b} \quad n=4 \rightarrow 0 = \sqrt{4+b}$$

$$b = -4$$

② دامنه اعداد حقیقی است پس: $4 - 1 + \varepsilon m^2 \leq 0 \rightarrow \Delta \leq 0$

$$+4(m^2-1) \leq 0$$

$$m^2 - 1 \leq 0 \rightarrow m^2 \leq 1 \rightarrow -1 \leq m \leq 1$$

$$1 - (-1) = 2$$

$$f(n) = \sqrt{4-m^2} \rightarrow 4-m^2 \geq 0 \rightarrow -2 \leq m \leq 2$$

$$[n] + [-n] + 1 \quad [0] + [0] + 1 = 1$$

$$[n] + [-n] + 1 = 0 \quad \text{در } n \neq 0$$

$$[-2, 2] \cap (1, \infty) = [-2, 2] \quad \text{چرا؟}$$

$n=0$ هم قابل قبول است!

اعداد صحیح در دامنه قرار دارد

$$\text{ا) } y = \sqrt{n^3 + 1} = \sqrt{n^3(n+1)} \quad n^3(n+1) \geq 0 \quad (2)$$

$$\begin{array}{c} -3 \quad * \quad 0 \quad * \\ -1 \quad + \quad 1 \quad + \end{array} \rightarrow D_n = [-1, +\infty)$$

$$\text{ب) } y = \sqrt{\frac{(n^2-1)(n^3-1)}{n^2-1}} = \sqrt{\frac{(n+1)(n-1)(n^3-1)}{(n-1)(n^2+1+n)}}$$

$$\begin{array}{c} -1 \quad * \quad * \quad \mu \\ + \quad - \quad - \quad - \quad + \end{array} \rightarrow D_n = (-\infty, -1] \cup [1, +\infty) \cup \{0\}$$

نصفه نازل و صافه +

$$\text{ا) } y = \sqrt{|n+1|-n} \quad \begin{array}{l} n \geq 1 \rightarrow n+1-n \geq 0 \rightarrow n \geq 0 \xrightarrow{n} n \geq 0 \\ n < 1 \rightarrow 1-n-n \geq 0 \rightarrow n \leq -1 \xrightarrow{n} n \leq -1 \end{array} \quad (3)$$

$$D_n = (-\infty, -1] \cup [0, +\infty)$$

$$\text{ب) } \sqrt{4-|2-n|} \quad \begin{array}{l} n \geq 2 \rightarrow 4+2-n \geq 0 \rightarrow n \leq 4 \xrightarrow{n} 2 \leq n \leq 4 \\ n < 2 \rightarrow 4-2+n \geq 0 \rightarrow n \geq -2 \xrightarrow{n} -2 \leq n < 2 \end{array}$$

$$D_n = [-2, 4]$$

الف) $y = \sqrt{1-n|n|}$

$n \geq 0 \rightarrow 1-n^2 \geq 0 \rightarrow -1 \leq n \leq 1$ (4)
 $n < 0 \rightarrow 1+n^2 \geq 0 \rightarrow n \in \mathbb{R} \rightarrow n \leq 0$

$D_n = (-\infty, 1]$

ب) $y = \frac{1}{\sqrt{3-|n-\omega|-1}}$

$n \geq \omega \rightarrow 3-n+\omega-1 \geq 0 \rightarrow n \leq \omega$
 $n < \omega \rightarrow 3-\omega+n-1 \geq 0 \rightarrow n \geq \omega$

$D_n = [\omega, \omega]$
 $\sqrt{3-|n-\omega|-1} \neq 0$

صورت سوال! استباه نوتی!

الف) $y = \frac{\sin^2 n - 1}{\cos n} \rightarrow \cos n \neq 0 \rightarrow n \neq K\pi + \frac{\pi}{2}, K\pi - \frac{\pi}{2}$ (V)

$D_n = \mathbb{R} - \left\{ K\pi + \frac{\pi}{2}, K\pi - \frac{\pi}{2} \right\}$ فرقی ندارند

ب) $y = \frac{\cos n}{|\cos n - 1|} \rightarrow |\cos n - 1| \neq 0 \rightarrow \cos n \neq 1$

$D_n = \mathbb{R} - \left\{ K\pi + \frac{\pi}{2}, K\pi - \frac{\pi}{2} \right\}$ (2) $n \neq K\pi + \frac{\pi}{2}, K\pi - \frac{\pi}{2}$

الف) $y = \frac{n+r}{|r_{n+1}| - |n+r|} \rightarrow |r_{n+1}| - |n+r| = 0$ (1)

$|r_{n+1}| = |n+r|$
 $\sqrt{n^2+1} + \sqrt{n} = n^2 + 9 + 4n$

$n^2 - rn - 1 = 0 \rightarrow n = \frac{-r}{2}, 1$ $D_n = \mathbb{R} - \left\{ \frac{-r}{2}, 1 \right\}$

Arman

$$\Rightarrow \sqrt{|r_{n+1}| - |r_n|} \rightarrow |r_{n+1}| - |r_n| \geq 0$$

↓ Rule

$$r_n^2 + r_{n+1} \geq r_n^2 + 4r_n + 9$$

↓

$$r_n^2 - r_n - 9 \geq 0$$

↓

$$\frac{-\frac{1}{2} \pm \sqrt{\frac{1}{4} + 9}}{2}$$

$$D_n = [R - (\frac{1}{2}, 1)]$$

$$P(n) = \sqrt{\frac{\log(r_{n-1})}{\log \omega}}$$

$$r_{n-1} > 0 \rightarrow n > \frac{1}{P}$$

(9)

$$\log \omega^{r_{n-1}} > 0 \rightarrow r_{n-1} > 1 \rightarrow n > 1$$

$$\log \log \omega^{r_{n-1}} > 0 \rightarrow \log \omega \leq 1$$

$$\frac{1}{n} \rightarrow D_n = [1, \frac{1}{n}]$$

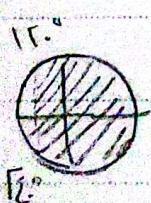
(10)

$$r_{n-1} \leq \omega$$

$$n \leq \mu$$

$$\text{الف) } y = \log(r \cos n + 1) \rightarrow r \cos n + 1 > 0$$

(10)



$$\cos n > -\frac{1}{r}$$

↓

$$D_n = [r \cos \frac{\pi}{4}, r \cos \frac{\pi}{2} + \frac{\pi}{r}]$$

Arman

$$ب) y = \sqrt{\log \frac{n-1}{n+1}} \rightarrow \frac{n-1}{n+1} > 0 \rightarrow + \frac{-1}{-1} +$$

$$\log \frac{n-1}{n+1} \geq 0 \rightarrow \frac{n-1}{n+1} \geq 1 \rightarrow \frac{n-1-n-1}{n+1} \geq 0$$

$$\rightarrow D_n = (-\infty, -1)$$

۲

$$\frac{-1}{+1} = -1 \quad \frac{-2}{n+1} \geq 0$$

۳) عبارت مفرج باید صاف باشد!

$$x \in \mathbb{Z} = [n] + [-n] + 1 = 1 \quad \checkmark$$

$$[n] + [-n] + 1 \rightarrow x \in \mathbb{Z}$$

$$x \notin \mathbb{Z} = [n] + [-n] + 1 = 0 \quad \times$$

حدت زیر را می‌کال فانتزی است!

$$-n^2 \geq 0 \rightarrow n^2 \leq 4 \rightarrow -2 \leq n \leq 2$$

$$\rightarrow D_f = \{-2, -1, 0, 1, 2\}$$

دامنه شامل ۵ عدد صحیح است!

۴- ب) $3 - |n-5| \geq 0 \rightarrow |n-5| \leq 3 \rightarrow -3 \leq n-5 \leq 3 \rightarrow 2 \leq n \leq 8$

$$\sqrt{3 - |n-5|} - 1 \neq 0 \rightarrow \sqrt{3 - |n-5|} \neq 1 \rightarrow 3 - |n-5| \neq 1 \rightarrow |n-5| \neq 2 \rightarrow n \neq 7, 3$$

$$D_f = [2, 8] - \{3, 7\} = [2, 3) \cup (3, 7) \cup (7, 8]$$