

تالیف نمایی

یازدهم پر A

صبر و ابرو

① زیر ادیان با معادله درجه یک باید یک سمت یک ریشه غیر صفر دارد.

$$a=2$$

$$f(x) = \sqrt{2x+b}$$

$$x=0$$

$$0 = \sqrt{4+b}$$

$$b = -4$$

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

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

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

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

$$f(x) = \frac{\sqrt{4-x^2}}{[x] + [-x] + 1} \rightarrow 4 - x^2 \geq 0 \rightarrow -2 \leq x \leq 2$$

$$[x] + [-x] + 1 = 0 \text{ در } x \in \mathbb{R} - \{0\}$$

$$[-2, 2] \cap (\mathbb{R} - \{0\}) = [-2, 2] - \{0\}$$

صفر در دامنه قرار دارد

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

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

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

لأنه نزلنا الواحد

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

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

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

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

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

الف) $y = \sqrt{1-u|u|}$

$u \geq 0 \rightarrow 1-u^2 \geq 0 \rightarrow -1 \leq u \leq 1$ $\hat{u}$ $\textcircled{4}$
 $u < 0 \rightarrow 1+u^2 \geq 0 \rightarrow u \in \mathbb{R} \xrightarrow{\wedge} u < 0$

$D_u = (-\infty, 1]$

ب) $y = \frac{1}{\sqrt{v-|u-\omega|-1}}$

$u \geq \omega \rightarrow v-u+\omega-1 \geq 0 \rightarrow u \leq v$ $\hat{u}$
 $u < \omega \rightarrow v-\omega+u-1 \geq 0 \rightarrow u \geq v$ $\hat{u}$
 $v \leq u < \omega$

$\xrightarrow{u} D_u = [v, v]$

الف) $y = \frac{\sin^p u - 1}{\cos u}$

$\rightarrow \cos u \neq 0 \rightarrow u \neq k\pi + \frac{\pi}{2}, k\pi - \frac{\pi}{2}$ $\textcircled{V}$

$\rightarrow D_u = \mathbb{R} - \left\{ k\pi + \frac{\pi}{2}, k\pi - \frac{\pi}{2} \right\}$

ب) $y = \frac{\cos u}{\cos u - 1} \rightarrow [\cos u - 1 \neq 0 \rightarrow \cos u \neq \frac{1}{p}]$

$\rightarrow D_u = \mathbb{R} - \left\{ k\pi + \frac{\pi}{p}, k\pi - \frac{\pi}{p} \right\}$

$u \neq k\pi + \frac{\pi}{p}, k\pi - \frac{\pi}{p}$

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

$\rightarrow |r_{n+1}| - |u+r| = 0$

$\textcircled{A}$

$\varepsilon u^r + 1 + \varepsilon u = u^r + 9 + 4u$

$|r_{n+1}| = |u+r|$

$r_{n+1} - r_n - 1 = 0 \rightarrow u = \frac{-\varepsilon}{r}, r$

$D_u = \mathbb{R} - \left\{ \frac{-\varepsilon}{r}, r \right\}$

Arman

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

↓ Rule

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

↓

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

↓

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

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

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

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

(9)

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

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

↓

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

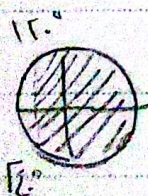
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$$n \leq p$$

$$\xrightarrow{n} D_n = [1, p]$$

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

(10)



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

↓

$$D_n = \left[K\pi - \frac{r\pi}{r}, K\pi + \frac{r\pi}{r} \right]$$

Arman

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$$b) y = \sqrt{\log \frac{n-1}{n+1}} \quad \begin{array}{l} \nearrow \frac{n-1}{n+1} > 0 \rightarrow \frac{-1}{-1-1} \\ \searrow \log \frac{n-1}{n+1} \geq 0 \rightarrow \frac{n-1}{n+1} \geq 1 \rightarrow \frac{n-1-n-1}{n+1} \geq 0 \end{array}$$

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

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