

# هلیا توکلین

۱ - باوردن اول باشد

$$(a-2)n^2 + an + b$$

$$a=2$$

$$2n+b \Rightarrow n=2 \Rightarrow 4+b=0 \quad \boxed{b=-4}$$

$$a > 0$$

$$\Delta \leq 0$$

$$f \leq 1 - 4m^2$$

۲ - شماره ناشی است

$$m^2 \leq 1$$

$$-1 \leq m \leq 1$$

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

- ۲, -۱, ۰, ۱, ۲  
۴ تا عدد صحیح

$$\begin{cases} f - n^2 \geq 0 \Rightarrow -2 \leq n \leq 2 \\ [n] + [n] + 1 \\ n \in \mathbb{Z} \Rightarrow 1 \checkmark \\ n \notin \mathbb{Z} \Rightarrow 0 \text{ عدد} \end{cases}$$

$$\text{الف) } y = \sqrt{n^4 + f n^2} \Rightarrow y = \sqrt{n^2(n+2)} \Rightarrow n^2(n+2) \geq 0$$

$$\text{ب) } y = \sqrt{\frac{(n^2-1)(n^2-3n^2)}{n^2-1}} \Rightarrow \frac{(n^2-1)(n^2-3n^2)}{(n^2-1)(n^2+1)} \geq 0$$

$$D_f = (-\infty, -1] \cup \{0\} \cup [2, +\infty)$$

$$\text{ج) } y = \sqrt{(n-1)-2} \Rightarrow |n-1|-2 \geq 0 \Rightarrow |n-1| \geq 2$$

$$D_f = (-\infty, -1] \cup [3, +\infty)$$

$$- ) y = \sqrt{\epsilon - |x - a|} \Rightarrow \epsilon - |x - a| \geq 0$$

$$|x - a| \leq \epsilon$$

$$- \epsilon \leq x - a \leq \epsilon$$

$$D_f = [-\epsilon, \epsilon]$$

$$y = \sqrt{1 - |x|}$$

(الف - 6)

$$1 - |x| \geq 0$$

$$|x| \leq 1 \Rightarrow x > 0 \rightarrow x \leq 1$$

$$x < 0$$

$$-1 \leq x \leq 1$$

$$-x^2 \leq 1 \Rightarrow -1 \leq x \Rightarrow \mathbb{R}^-$$

$$- ) y = \frac{1}{\sqrt{\epsilon - |x - a|} - 1}$$

$$\sqrt{\epsilon - |x - a|} = 1$$

$$\epsilon - |x - a| = 1$$

$$\Rightarrow \epsilon = (x - a) \Rightarrow \begin{matrix} x = \epsilon \\ x = -\epsilon \end{matrix} \text{ محاذات}$$

$$\epsilon - |x - a| \geq 0 \Rightarrow \epsilon \geq |x - a| \Rightarrow -\epsilon \leq x - a \leq \epsilon$$

$$-\epsilon \leq x \leq \epsilon$$

$$D_f = [-\epsilon, \epsilon] - \{x, -x\}$$

$$\text{الف 1) } y = \frac{\sin^2 x - 1}{\cos x} \Rightarrow \cos \neq 0$$

$$D_f = \mathbb{R} - \left\{ k\pi + \frac{\pi}{2} \right\}$$

$$- ) y = \frac{\cos x}{x \cos - 1} \Rightarrow x \cos \neq 1 \Rightarrow \cos \neq \frac{1}{x}$$

$$D_f = \mathbb{R} - \left\{ xk\pi \pm \frac{\pi}{x} \right\}$$

$$I \cap II \Rightarrow D_f = (-\infty, -1)$$

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$$1) \quad f = \frac{n+r}{|r_{n+1}| - |n+r|}$$

$$|r_{n+1}| - |n+r| \neq 0$$

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$$|r_{n+1}| \neq |n+r|$$

$$(r_{n+1})^r \neq (n+r)^r$$

$$\{n^r + \varepsilon_{n+1} \neq n^r + \varepsilon_n + a$$

$$r n^r - r n_{-1} \neq 0$$

$$(r n + \varepsilon)(n - r) \neq 0$$

$$D_f = \mathbb{R} \cdot \left\{ \frac{\varepsilon}{n}, r \right\} \subseteq \begin{matrix} n \neq r \\ n \neq -\frac{\varepsilon}{r} \end{matrix}$$

$\Leftarrow$

$$\text{---)} |r_{n+1}| - |n+r| \geq 0$$

$$|r_{n+1}| \geq |n+r|$$

$$(r_{n+1})^r \geq (n+r)^r$$

$$r n^r - (n+r) \geq 0$$

$$n \leq -\frac{\epsilon}{r}$$

$$n \geq r$$

$$D = (-\infty, -\frac{\epsilon}{r}] \cup [r, +\infty)$$

$$\log_{1/a}^{(n-1)} > 0 \Rightarrow 1 < r_{n-1} \Rightarrow r < r_n \Rightarrow 1 < n$$

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$$r_{n-1} > 0 \Rightarrow r_n > 1 \rightarrow n > \frac{1}{r}$$

$$\log_{1/a} \log_a^{(n-1)} \geq 0 \Rightarrow \log_a^{r_{n-1}} \geq 1 \Rightarrow a \geq r_{n-1} \Rightarrow r_n \leq r \Rightarrow n \leq r$$

$$c) ) \quad r(\cos s_{n+1}) > 0 \Rightarrow \cos s_n > -\frac{1}{r}$$

- 1.

$$D_f = \mathbb{R} - \left[ r_k \pi + \frac{r}{r}, r_k \pi + \frac{r}{r} \right]$$

$$- ) \quad \log \frac{n-1}{n+1} \geq 0 \Rightarrow \frac{n-1}{n+1} > 1 \rightarrow \frac{n-1}{n+1} - 1 > 0 \Rightarrow \frac{-r}{n+1} > 0$$

$$II \Rightarrow \frac{n-1}{n+1} > 0 \rightarrow \frac{-1}{1 \pm b} \Rightarrow (-\infty, -1) \cup [1, +\infty) \quad \frac{-1}{1 \pm b} =$$

$$I \cap II \Rightarrow D_f = (-\infty, -1) \quad I \Rightarrow (-\infty, -1)$$