

١٣، ٧٧٥

رَبِّكَ انْزِيلِي - اِنْزِيلِي

$$f(x) = \sqrt{(x-2)x^2 + ax + b} \rightarrow a-2=0 \rightarrow a=2 \quad \text{١- تابع خطی} \leftarrow \text{میزب } x^2 = 0$$

$$f(x) = \sqrt{2x+b} \rightarrow x=3 \rightarrow 2(3)+b=0 \rightarrow b=-6$$

$$f(x) = \sqrt{2x-6}$$

$$2x \geq 6 \rightarrow x \geq 3$$

$$f(x) = \sqrt{x^2 + 2x + 2 - m^2}$$

میزب مقدار = 0

-2

$$x^2 + 2x + 2 - m^2 \geq 0 \rightarrow (x+1)^2 + 1 - m^2 \geq 0$$

میزب مقدار + 1

$$1 - m^2 \geq 0 \rightarrow m^2 \leq 1 \rightarrow -1 \leq m \leq 1 \rightarrow D_m = [-1, 1] \quad \text{میزب مقدار} \rightarrow 1 - (-1) = 2$$

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

$$\rightarrow I) 4-x^2 \geq 0 \rightarrow (2-x)(2+x) \geq 0$$

$$= \frac{2}{x+2} \quad \text{٣-}$$

$$[x] + [-x] + 1$$

$$[x] + [-x] \neq -1$$

$$\rightarrow D_f = \mathbb{I}$$

$$\mathbb{I} \cap \mathbb{I} \rightarrow D_f = \{x | x=k, k \in \mathbb{Z}, k: [-2, 2]\}$$

$$\rightarrow -2, -1, 0, 1, 2$$

$$\rightarrow \text{میزب مقدار}$$

-E

$$f(x) = \sqrt{x^3 + 3x^2} \rightarrow$$

$$= \frac{3}{x+3} \quad \text{میزب مقدار}$$

$$D_f = [-3, +\infty)$$

$$\sqrt{x^2(x+3)} \rightarrow x^2(x+3) \geq 0$$

$$ب) y = \sqrt{\frac{(x-1)(x+1)x^r(x-\mu)}{(x-1)(x^r+x+1)}} \rightarrow \frac{(x-1)(x+1)x^r(x-\mu)}{(x-1)(x^r+x+1)} \geq 0$$

$$\begin{array}{ccccccc} & -1 & 0 & 1 & \mu & & \\ + & - & + & - & + & - & + \end{array}$$

$\Delta < 0 \Rightarrow +$ or $\Delta > 0 \Rightarrow -$

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

$$الف) y = \sqrt{|x-1| - \mu} \rightarrow I) x \geq 1 \Rightarrow \sqrt{x-\omega} \rightarrow D_f = x \geq \omega - \omega$$

$$II) \text{ if } x < 1 \rightarrow \sqrt{-(x+1)} \Rightarrow D_f = x \leq -1 \xrightarrow{I \cap II} (-\infty, -1] \cup [\omega, +\infty)$$

$$ج) y = \sqrt{4 - |x-2|} \rightarrow I) x \leq 2 \rightarrow \sqrt{x+2} \rightarrow x \geq -2 \rightarrow D_f = [-2, 2]$$

$$II) x > 2 \rightarrow \sqrt{4-x} \rightarrow x \leq 4 \rightarrow D_f = (2, 4] \quad \bigcup \quad D_f = [-2, 4]$$

$$د) y = \sqrt{1-x|x|} \rightarrow I) x \geq 0 \rightarrow \sqrt{(1-x)(1+x)} \rightarrow (1-x)(1+x) \geq 0$$

$$\begin{array}{ccccc} -1 & 0 & 1 & & \\ + & - & + & - & + \end{array} \rightarrow D_f = [0, 1]$$

$$II) x < 0 \rightarrow \sqrt{1+x^2} \rightarrow \Delta < 0 \rightarrow \text{این عبارت همیشه مثبت است} \rightarrow D_f = (-\infty, 0)$$

$$I \cup II \rightarrow (-\infty, 1]$$

$$ه) y = \frac{1}{\sqrt{\mu - |x-\omega| - 1}} \rightarrow I) \mu - |x-\omega| \geq 0$$

$$\rightarrow x - \omega \leq \mu \rightarrow x \leq \mu + \omega$$

$$x - \omega \geq -\mu \rightarrow x \geq \omega - \mu \rightarrow D_f = [\omega - \mu, \omega + \mu]$$

$$II) \mu - |x-\omega| \neq 1$$

$$|x-\omega| \neq 1 \rightarrow x - \omega \neq 1 \rightarrow x \neq \omega + 1$$

$$\hookrightarrow -x + \omega \neq 1 \rightarrow x \neq \omega - 1$$

$$\xrightarrow{I \cap II} D_f = [\omega - \mu, \omega + \mu] - \{\omega - 1, \omega + 1\}$$

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سوال ۷ تا ۹ آیدر رنده است!

Date:

الف) $y = \log(2\cos x + 1) \rightarrow 2\cos x + 1 > 0 \rightarrow \cos x > -\frac{1}{2} = -0.5$



$D_f = (2k\pi - \frac{2\pi}{3}, 2k\pi + \frac{2\pi}{3})$

انتهای بازه از ابتدای آن
کوتاه تر است!

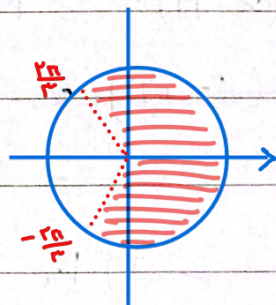
ب) $y = \sqrt{\log \frac{x-1}{x+1}} \rightarrow I) x \neq -1$

II) $\frac{x-1}{x+1} > 0 \rightarrow \frac{-1}{+} \frac{+}{-} \rightarrow (-\infty, -1) \cup (1, +\infty)$

III) $\log \frac{x-1}{x+1} \geq 0 \rightarrow \frac{x-1}{x+1} \geq 1 \rightarrow \frac{x-1-x-1}{x+1} \geq 0 \rightarrow \frac{-2}{x+1} \geq 0$

$\rightarrow \frac{-1}{+} \frac{+}{-} \rightarrow (-\infty, -1) \Rightarrow I \cap II \cap III \rightarrow D_f = (-\infty, -1)$

الف - ۱۰) $2\cos x + 1 > 0 \rightarrow \cos x > -\frac{1}{2}$



$\rightarrow D_f = (2k\pi - \frac{\pi}{3}, 2k\pi + \frac{\pi}{3})$

الف - $y = \frac{\sin^n x - 1}{\cos x} \rightarrow \cos x \neq 0 \rightarrow$  $\rightarrow Df = \mathbb{R} - \left\{k\pi + \frac{\pi}{2}\right\}$

V- ب) $y = \frac{C \cdot \sin}{r \cdot \sin - 1} \rightarrow r \cdot \sin - 1 \neq 0 \rightarrow C \sin \neq \frac{1}{r}$

 $Df = IR - \left\{ rkn \pm \frac{\pi}{r} \right\}$

٨- الف) $|r_{n+1}| - |n+3| = 0 \rightarrow |r_{n+1}| = |n+3| \xrightarrow{\text{ننظر}} r_n^2 + r_{n+1} = n^2 + 4n + 9$

$$\rightarrow \mu_n^r - r_n - 1 = 0 \rightarrow n^r - r_n - r_2 = 0 \rightarrow (n-4)(n+1) = 0 \rightarrow n = \frac{4}{r} = r \rightarrow D_f = \mathbb{R} - \left\{ -\frac{r}{r}, r \right\}$$

$$^{\text{توان}} \wedge - |x_{n+1}| - |n+3| \geq 0 \rightarrow |x_{n+1}| \geq |n+3| \rightarrow x_{n+1}^2 \geq n^2 + 4n + 9 \rightarrow x_n^2 - x_{n+1}^2 \geq 0$$

$$\frac{-\frac{r}{2}}{+\phi - \phi +} \rightarrow D_f = (-\infty, -\frac{r}{2}] \cup [r, +\infty)$$

9) $\log_a \log_a^{n-1} \rightarrow n-1 > 0 \rightarrow n > \frac{1}{2}$

$$\log_a^{r_{n-1}} > 1 \rightarrow r_{n-1} > a^1 \rightarrow r_{n-1} > 1 \rightarrow n > 1$$

$\log_{\frac{1}{\Delta}} \log_{\frac{1}{\Delta}}^{r_{n-1}} \geq 0$ منباینه هه $\rightarrow \log_{\Delta}^{r_{n-1}} \leq 4 \Delta \rightarrow \log_{\Delta}^{r_{n-1}} \leq 1 \rightarrow r_{n-1} \leq \Delta \rightarrow r_n \leq 4 \rightarrow n \leq 3$ حبته عهوه
مهسه!
 $\hookrightarrow D_f = (1, 3]$

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