

(B) ...

$$\sqrt{(a-r)x^2 + ax + b}$$

$\Rightarrow$ خط داریم $a=2$

$$r = \text{یقه} \Rightarrow rx + b \Rightarrow 5 + b = 0 \Rightarrow b = -5$$

$$\sqrt{x^2 + 2x + 5 - m^2}$$

$$D_f = R \Rightarrow \begin{matrix} a > 0 \\ \Delta \leq 0 \end{matrix} \Rightarrow f - \Delta + f m^2 \leq 0$$

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



$$5m^2 \leq f \Rightarrow m^2 \leq 1 \Rightarrow -1 \leq m \leq 1$$

min max

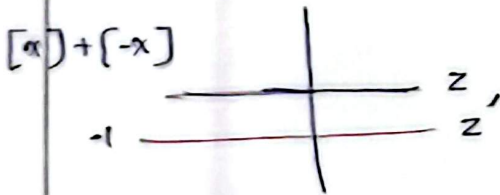
$$\sqrt{f - x^2}$$

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

$$① f - x^2 \geq 0 \Rightarrow x^2 \leq f \Rightarrow -\sqrt{f} \leq x \leq \sqrt{f}$$

$$② [x] + [-x] \neq -1 \Rightarrow x \in \mathbb{Z}$$

$$\{-2, -1, 0, 1, 2\} \subseteq \mathbb{N}$$



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

$$\begin{matrix} -2 & 0 \\ - & + \end{matrix} \quad D_f = [-2, +\infty)$$

$$\sqrt{\frac{(x-1)(x+1)x^2(x-2)}{(x-1)(x^2+x+1)}}$$

$\Delta < 0$



$$\begin{matrix} -1 & 0 & 1 & 2 \end{matrix} \quad (-\infty, -1] \cup \{0\} \cup [2, +\infty)$$

$$a) y = \sqrt{|x-2|-3} \Rightarrow |x-2| \geq 3 \Rightarrow \begin{matrix} x-2 \geq 3 & x \geq 5 \\ x-2 \leq -3 & x \leq -1 \end{matrix} \Rightarrow (-\infty, -1] \cup [5, +\infty)$$

$$c) \sqrt{f - |2-x|}$$

$$\Rightarrow f - |2-x| \geq 0 \Rightarrow |2-x| \leq f$$

$$-f \leq 2-x \leq f$$

$$-5 \leq -x \leq 5$$

$$-5 \leq x \leq 5$$

$$x = -5$$

$$a) y = \sqrt{1-x|x|} \Rightarrow x|x| \leq 1 \Rightarrow \begin{cases} x \geq 0: x^2 \leq 1 \Rightarrow 0 \leq x \leq 1 \\ x < 0: -x^2 \leq 1 \Rightarrow x^2 \geq -1 \Rightarrow x \in \mathbb{R} \Rightarrow x < 0 \end{cases} \Rightarrow (-\infty, 1] \leftarrow U$$

$$b) \frac{1}{\sqrt{r^2 - |x-\omega|} - 1}$$

$$y = \frac{\sin^2 x - 1}{\cos x}$$

$$① r = |x - \omega| \geq 1 \Rightarrow |x - \omega| \leq r \Rightarrow -r \leq x - \omega \leq r \Rightarrow \omega - r \leq x \leq \omega + r$$

$$② r = |x - \omega| \neq 1 \Rightarrow |x - \omega| = r \Rightarrow \begin{cases} x - \omega = r \\ x - \omega = -r \end{cases} \Rightarrow x = \omega + r \vee x = \omega - r \Rightarrow D = [\omega, \omega + r] \cup [\omega - r, \omega]$$

$$\cos x \neq 0$$



$$R = \left\{ 2K\pi + \frac{\pi}{2}, 2K\pi - \frac{\pi}{2} \right\}$$

$$\frac{\cos x}{r(\cos x - 1)}$$

$$r(\cos x - 1) \neq 0 \Rightarrow \cos x \neq \frac{1}{r}$$

$$R = \left\{ 2K\pi + \frac{\pi}{r}, 2K\pi + \frac{\omega\pi}{r} \right\}$$

$$\frac{x+3}{|2x+1| - |x+3|}$$

$$(|2x+1|)^r \neq (|x+3|)^r \Rightarrow 2^r x^r + 2^r x + 1 = x^r + 3^r x + 9 \Rightarrow \begin{cases} 2^r x^r - 2^r x + 1 = 0 \\ x^r - 3^r x + 2^r = 0 \end{cases} \Rightarrow x = \frac{1}{2^r} = \frac{1}{2}$$

$$\sqrt{|2x+1| - |x+3|} \Rightarrow |2x+1| \geq |x+3| \Rightarrow 2^r x^r + 2^r x + 1 \geq x^r + 3^r x + 9 \Rightarrow 2^r x^r - 2^r x + 1 \geq x^r - 3^r x + 9$$

$$\sqrt{\log_{\frac{1}{10}} \log_{\frac{1}{10}} (2x-1)}$$

$$① 2x - 1 \geq 0 \Rightarrow x \geq \frac{1}{2}$$

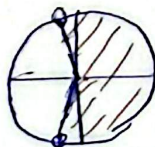
$$② \log_{\frac{1}{10}} (2x-1) \geq 0 \Rightarrow 2x-1 \geq 1 \Rightarrow x \geq 1$$

$$x \geq 1$$

توضیح: $\frac{1}{r}$ به هرگز از $\frac{1}{r}$ بزرگتر نیست و زیر ادبیات تکریم شده است.

$$a) \log(r \cos x + 1) \Rightarrow$$

$$r \cos x + 1 \geq 0 \Rightarrow \cos x \geq -\frac{1}{r}$$



$$R = \left[2K\pi + \frac{\pi}{r}, 2K\pi + \frac{\pi}{r} \right]$$

$$b) \sqrt{\log_{\frac{1}{10}} \frac{x-1}{x+1}}$$

$$\frac{x-1}{x+1} \geq 0$$

$$\frac{-1}{+} \mid \frac{1}{+} \mid \frac{+}{+} \Rightarrow (-\infty, -1) \cup (1, +\infty)$$