

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

مقادیر
قطر $\rightarrow a=2$

$2x + b \rightarrow x = 3$

$$2 + b = 0$$

$$b = -2$$

$$\Delta < 0$$

$$f - f(2-m^2) \leq 0$$

$$-f + m^2 \leq 0$$

$$f(m^2-1) \leq 0$$

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

$$m^2 < 1 \quad -1 \leq m \leq 1$$

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

$$D \rightarrow x^2 \leq 4$$

$$D = \mathbb{Z} \quad -2 \leq x \leq 2$$

اعداد

الف) $\sqrt{x^2(x+3)} \rightarrow x+3 > 0$
 $x > -3$

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

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

1	0	1	3
+	+	-	-

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

الف) $\sqrt{|x-2| - 3}$

$$|x-2| \geq 3$$

$$x-2 \geq 3 \rightarrow x \geq 5$$

$$x-2 \leq -3 \rightarrow x \leq -1$$

$$D = (-\infty, -1] \cup [5, +\infty)$$

ب) $\sqrt{4 - |2-x|}$

$$4 \geq |2-x|$$

$$-4 \leq 2-x \leq 4$$

$$-6 \leq -x \leq 2$$

$$6 \geq x \geq -2$$

$$D = [-2, 6]$$

الف) $\sqrt{1 - x|x|}$

$$x < 0 \rightarrow -x^2 \rightarrow 1 + x^2 > 0 \rightarrow \text{همواره برقرار}$$

$$x > 0 \rightarrow x^2 \rightarrow 1 - x^2 > 0 \rightarrow 1 > x^2 \rightarrow -1 < x \leq 1$$

$$D = (-\infty, 1]$$

ب) $\frac{1}{\sqrt{2 - |x-2|} - 1}$

$$2 - |x-2| > 0$$

$$2 > |x-2|$$

$$-2 < x-2 < 2$$

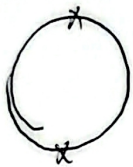
$$0 < x < 4$$

$$D = [2, 4] - \{2, 4\}$$

$$2 \neq |x-2|$$

$$x \neq 4, 0$$

الف)



$$D = \mathbb{R} - \left\{ k\pi + \frac{\pi}{4} \right\}$$

ب)

$$\begin{aligned} r \cos \pi &\neq 1 \\ \cos \pi &\neq \frac{1}{r} \end{aligned}$$



$$D = \mathbb{R} - \left\{ k\pi + \frac{\pi}{4}, k\pi + \frac{3\pi}{4} \right\}$$

الف) $|x+1| \neq |x+3|$ $x+1 = x+3 \Rightarrow x=2$ $D = \mathbb{R} - \left\{ 2, \frac{-5}{2} \right\}$
 $x+1 = -x-3 \Rightarrow x = \frac{-5}{2}$
 $x = -2$

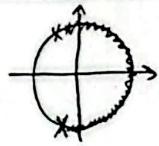
ب) $x \leq -2 \rightarrow -2x-1+x+3 \quad -x+2 > 0 \rightarrow x > 2$
 $-3 < x < -\frac{1}{2} \rightarrow -2x-1-x-3 \quad -2x-4 > 0 \rightarrow \frac{-4}{2} > x \rightarrow -2 < x \leq \frac{-5}{2}$
 $\frac{1}{2} < x \rightarrow x+1-x-3 \quad x \geq 2$

$$D = \mathbb{R} - (-\infty, \frac{-5}{2}] \cup [2, +\infty)$$

$2x-1 > 0 \rightarrow 2x > 1 \quad x > \frac{1}{2}$
 $\log_{\frac{1}{2}} \log_{\frac{1}{2}} (x-1) > 0 \rightarrow 0 < \log_{\frac{1}{2}} (x-1) \leq 1$
 $2x-1 > 1 \quad \log_{\frac{1}{2}} \log_{\frac{1}{2}} (x-1) \rightarrow 2x-1 \leq \omega$
 $2x > 2 \quad 2x \leq 3$
 $x > 1 \quad x \leq \frac{3}{2}$

$$(1, \frac{3}{2}]$$

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



$$D = \left(k\pi + \frac{\pi}{4}, k\pi + \frac{3\pi}{4} \right)$$

ب) $\frac{x-1}{x+1} \geq 1$ $\frac{x-1-x-1}{x+1} \geq 0$ $\frac{-2}{x+1} \geq 0$ $D = (-\infty, -1)$

