

$$f(x) = \sqrt{(x-1)x^2 + ax + b} \rightarrow a-1=0 \rightarrow a=1 \quad \text{یا } x^2 \text{ ضریب } = 0$$

$$f(x) = \sqrt{x^2 + b} \rightarrow x=1 \rightarrow 1(1)+b=0 \rightarrow \boxed{b=-1}$$

$$f(x) = \sqrt{x^2 - 1}$$

$$x^2 \geq 1 \rightarrow \boxed{x \geq 1 \vee x \leq -1}$$

$$f(x) = \sqrt{x^2 + 2x + 1 - m^2} \quad \text{معرّن مقدار } = 0$$

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

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مربع کامل

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

$$f(x) = \frac{\sqrt{1-x^2}}{[x] + [-x] + 1} \rightarrow 1) 1-x^2 \geq 0 \rightarrow (1-x)(1+x) \geq 0 \quad \text{یا } \frac{1-x^2}{1+x} \rightarrow [-1, 1]$$

[x] + [-x] + 1 \rightarrow [x] + [-x] \neq -1 \rightarrow D_f = \mathbb{I}

$$\mathbb{I} \cap \mathbb{I} \rightarrow D_f = \{x | x=k, k \in \mathbb{Z}, k \in [-1, 1]\}$$

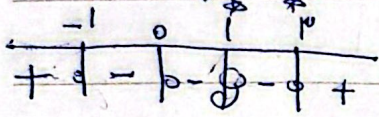
$$\rightarrow -1, -1, 0, 1, 1 \rightarrow \text{عدد}$$

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$$الف) y = \sqrt{x^3 + 13x^2} \rightarrow \frac{-13}{2} + \frac{13}{2} + \dots \quad D_f = [-13, +\infty)$$

$\sqrt{x^2(x+13)} \rightarrow x^2(x+13) \geq 0$

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



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

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

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

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

$$ب) y = \sqrt{4 - |x-1|} \rightarrow I) x \leq 1 \rightarrow \sqrt{x+1} \leadsto x \geq -1 \rightarrow D_f = [-1, 1]$$

$$II) x > 1 \leadsto \sqrt{4-x} \leadsto x \leq 4 \rightarrow D_f = (1, 4] \quad \text{so } D_f = [-1, 4]$$

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

$$\frac{-1}{-d+b} \leadsto D_f = [0, 1]$$

$$II) x < 0 \rightarrow \sqrt{1+x^2} \rightarrow \Delta < 0 \xrightarrow{x \geq 0} + \text{ or } \Delta > 0 \xrightarrow{x < 0} - \rightarrow D_f = (-\infty, 0)$$

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

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

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

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

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

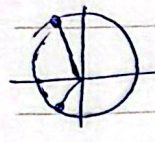
$$|x-\omega| \neq 1 \rightarrow x - \omega \neq 1 \rightarrow x \neq \omega + 1$$

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

Scibó

Date:

الف) $y = \log(r \cos x + 1) \rightarrow r \cos x + 1 > 0 \rightarrow \cos x > -\frac{1}{r} = 10$

 $D_f = (rK\pi + \frac{r\pi}{\mu}, rK\pi - \frac{r\pi}{\mu})$

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

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