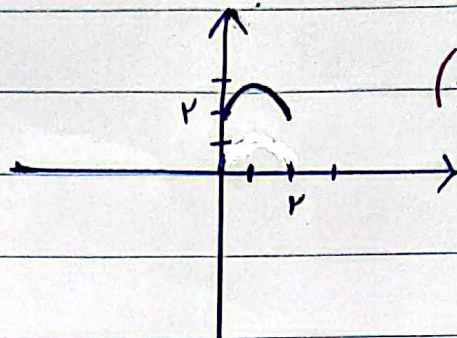


سید آرمینا ایران پور دهم C دختر

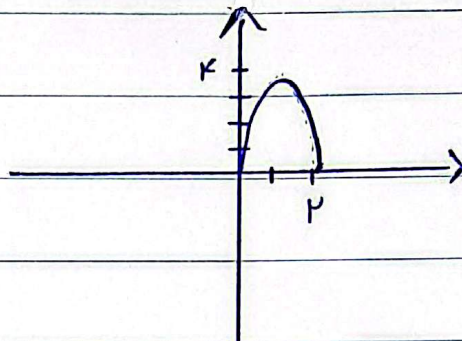
$$f(x) + 2$$

دو به بالا



(الف)

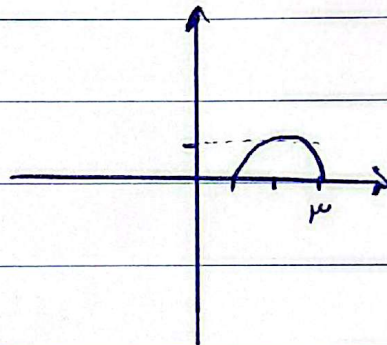
$$2f(x) \Rightarrow 2y, x \text{ قبلی}$$



(ب)

$$f(x-1)$$

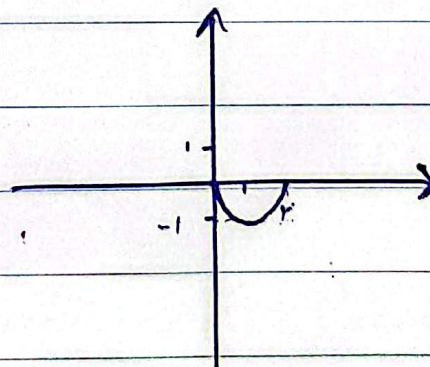
یک واحد به راست



(ج)

$$-f(x)$$

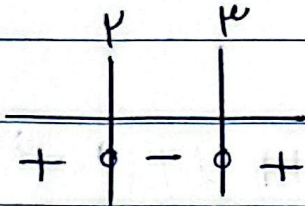
عکس آینه



(د)

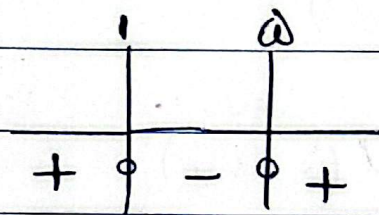
$$(الف) \quad x^2 - 5x + 4 > 0 \Rightarrow (x - 2)(x - 4) \quad (2)$$

فقط مثبت ها
من ریشه دار
نظرم نمی گیریم



$$\Rightarrow (-\infty, 2) \cup (4, +\infty)$$

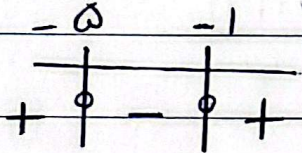
$$(ب) \quad x^2 - 4x + 5 < 0 \Rightarrow (x - 1)(x - 5)$$



$$\Rightarrow (1, 5)$$

عبارت فقط منفی ها را
می خواهد پس ریشه دار در نظرم نمی گیریم

$$(ج) \quad x^2 + 4x + 5 > 0 \Rightarrow (x + 1)(x + 5)$$



$$\Rightarrow (-\infty, -5) \cup (-1, +\infty)$$

$$(د) \quad x^2 - 7x + 4 < 0 \Rightarrow (x - 1)(x - 4)$$



$$\Rightarrow (1, 4)$$

$$\text{الف) } \frac{x^2 - 4x + 4}{x - 2} < 0 \Rightarrow \frac{(x-1)(x-2)}{x-2} \quad (14)$$

$$\begin{array}{c} 1 \quad 2 \quad 2 \\ | \quad | \quad | \\ - \quad + \quad - \quad + \\ \circ \quad \circ \quad \circ \end{array} \Rightarrow (-\infty, 1) \cup (2, 2)$$

$$\text{ب) } \frac{x^2 - 1}{x^2 - 4x + 4} > 0 \Rightarrow \frac{(x-1)(x+1)}{(x-1)(x-2)}$$

$$\begin{array}{c} -1 \quad 1 \quad 2 \\ | \quad | \quad | \\ + \quad - \quad - \quad + \\ \circ \quad \circ \quad \circ \end{array} \Rightarrow (-\infty, -1] \cup (2, +\infty)$$

$$\text{الف) } y = \sqrt{\frac{x^2 - 1}{x^2 - x}} \Rightarrow \frac{(x-1)(x+1)}{x(x-1)(x+1)} > 0 \quad (15)$$

$$\begin{array}{c} -1 \quad 0 \quad 1 \quad 1 \\ | \quad | \quad | \quad | \\ + \quad - \quad + \quad + \\ \circ \quad \circ \quad \circ \quad \circ \end{array} \Rightarrow (-\infty, -1) \cup (0, 1) \cup (1, +\infty)$$

$$\text{ب) } y = \sqrt{\frac{x^2 - 19}{x^2 - 4x + 4}} \Rightarrow \frac{(x-4)(x+4)}{(x-1)(x-4)} > 0$$

$$\begin{array}{c} -4 \quad 1 \quad 4 \\ | \quad | \quad | \\ + \quad - \quad + \quad + \\ \circ \quad \circ \quad \circ \end{array} \Rightarrow (-\infty, -4] \cup (1, 4) \cup (4, +\infty)$$

الف) $y = \sqrt{x - \sqrt{x - a}}$

(A)

$$x - \sqrt{x - a} \geq 0 \Rightarrow x \geq \sqrt{x - a} \Rightarrow x^2 \geq x - a$$

$$\Rightarrow x \geq -a$$

$$x - a \geq 0 \Rightarrow x \geq a \Rightarrow a \leq x \Rightarrow a \geq -1$$

$$\Rightarrow a \leq x \text{ و } a \geq -1 \Rightarrow [1, x]$$

ب) $y = \sqrt{x - \sqrt{x - x}}$

$$x - \sqrt{x - x} \geq 0 \Rightarrow x \geq \sqrt{x - x} \Rightarrow x \geq x - x \Rightarrow$$

$$x \geq 0 \Rightarrow x \leq x$$

$$x - x \geq 0 \Rightarrow x \geq x$$

$$x \leq x \text{ و } x \geq x \Rightarrow [x, x]$$

الف) $y = \sqrt{x - \sqrt{x - x}} \Rightarrow x - \sqrt{x - x} \geq 0 \Rightarrow x \geq \sqrt{x - x}$ (C)

$$x \geq x - x$$

$$\sqrt{x} \geq x \Rightarrow x \leq \sqrt{x}$$

$$x \geq -\sqrt{x}$$

$$\Rightarrow [-\sqrt{x}, \sqrt{x}]$$

ب) $y = \sqrt{x|x| - 9} \Rightarrow x|x| - 9 \geq 0 \Rightarrow x|x| \geq 9$

$$(-\infty, -3]$$

$$\cup [3, +\infty)$$

$$x \leq -3 \text{ و } x \geq 3$$

$$\Leftrightarrow |x| \geq 3$$

SEVIL

$$\text{الف) } y = \frac{\mu \sqrt{|a|+1}}{\sqrt{|a|}-\mu} \Rightarrow |a| \neq \mu \Rightarrow a \neq \pm \mu \quad (\vee)$$

$$D_f = \mathbb{R} - \{\pm \mu\}$$

$$\text{ب) } y = \frac{\mu \sqrt{a+1}}{\sqrt{a}-\mu} \Rightarrow \begin{cases} a \geq 0 \\ \sqrt{a} \neq \mu = a \neq 9 \end{cases}$$

$$D_f = [0, +\infty) - \{9\}$$

$$\text{الف) } y = \frac{\sin a}{\mu \cos a - 1} \Rightarrow \mu \cos a \neq 1 \quad (\wedge)$$

$$\cos a \neq \frac{1}{\mu}$$

$$\begin{matrix} \wedge \\ \mu_0 & \mu_0 \end{matrix}$$

$$D_f = \mathbb{R} - \left\{ \mu k\pi \pm \frac{\pi}{\mu} \right\}$$

$$ب) y = \frac{\cos u + 1}{r \sin u + 1} \Rightarrow r \sin u \neq -1 \quad (A)$$

$$\sin u \neq -\frac{1}{r}$$

$$\sin u \neq 110^\circ, 250^\circ$$

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

$$ج) y = \frac{\frac{\sin}{\cos} u + r}{\frac{\cos}{\sin} u - 1} \Rightarrow \cot u \neq 1 \Rightarrow \cos \neq \sin$$

لَا يَسَوِي، اَوَّلِ، سَوِي

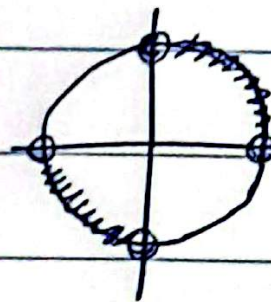
$$u \neq k\pi$$

$$u \neq k\pi + \frac{\pi}{4}$$

$$u \neq k\pi + \frac{5\pi}{4}$$

$$\cos \neq 0$$

$$\sin \neq 0$$



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

SEVIL

$$1) y = \frac{\sin \alpha + 1}{K \sin \alpha - K} \Rightarrow K \sin \alpha \neq K$$

$$\sin \alpha \neq \frac{K}{K}$$

$$\sin \alpha \neq \frac{r_0}{r_0}$$

$$\sin \alpha \neq 1, 0, -1$$

$\mathcal{D} =$

$$\mathbb{R} - \left\{ K\pi \pm \frac{\pi}{K} \right\}$$

$$y = \frac{1}{\sqrt{K|a-K| - \frac{1}{K}}} \Rightarrow K|a-K| - \frac{1}{K} > 0 \quad (9)$$

$$K|a-K| > \frac{1}{K}$$

$$|a-K| > \frac{1}{K}$$

$$a-K > \frac{1}{K} \Rightarrow a > \frac{K+1}{K}$$

$$a-K < -\frac{1}{K} \Rightarrow a < \frac{K-1}{K}$$

$$D_f = \left(-\infty, \frac{K-1}{K}\right) \cup \left(\frac{K+1}{K}, +\infty\right)$$

SEVIL

$$\text{الف) } y = \sqrt{K - r|a|}$$

(1.)

$$K - r|a| \geq 0 \Rightarrow K \geq r|a| \Rightarrow r \geq |a|$$

$$|a| \leq r$$

$$D_f = [-r, r]$$

$$\Leftarrow -r \leq a \leq r$$

$$\text{ب) } y = \sqrt{\frac{|a|}{|a|}} \Rightarrow \frac{|a|}{|a|} \geq 0 \Rightarrow D_f = \mathbb{R} - \{0\}$$

$$|a| \neq 0 \Rightarrow a \neq 0$$