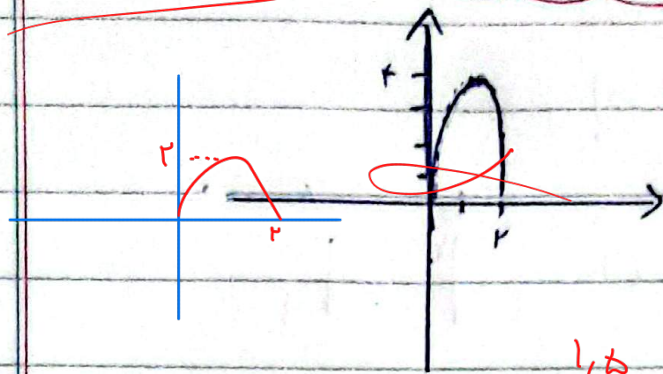


تلفٹ شہر سیرس نہ آؤنا ایوان پور پور از سرور (جو منور فی لبرٹ)

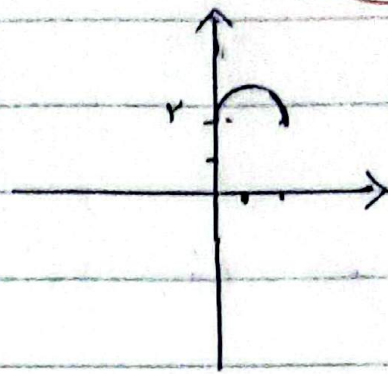
الیا جی پی

دھم C دختر

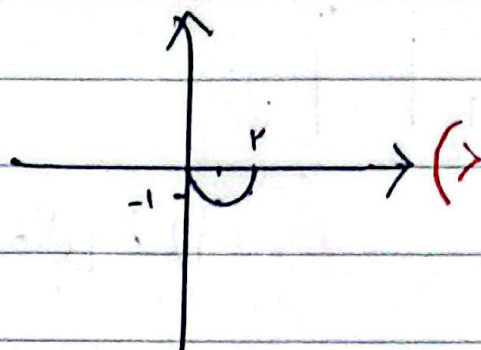
۱۸, ۷۵



$$f(x) \Rightarrow y$$

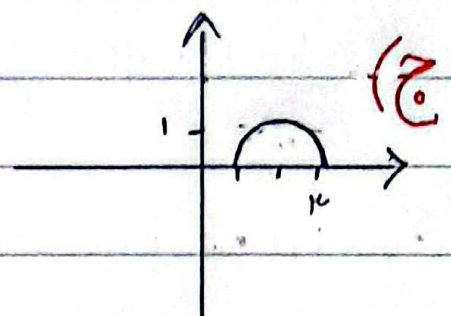


$$f(x) + \frac{1}{x}$$



$$-f(x)$$

بدعکس

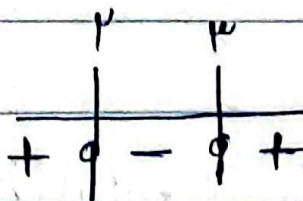


$$f(x-1)$$

باعت

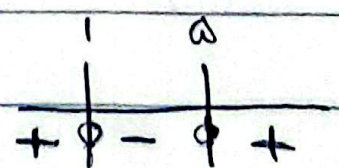
$$x^2 - 2x + 4 > 0 \Rightarrow (x-2)(x-4)$$

(۲)



$$D_f = (-\infty, 2) \cup (4, +\infty)$$

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



$$\Rightarrow D_f = (1, 5)$$

SEVIL

$$ج) x^2 + 4x + 5 \geq 0 \Rightarrow (x+1)(x+5) \quad \begin{array}{c} -1 \quad -5 \\ + \quad | \quad - \quad | \quad + \end{array}$$

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

$$د) x^2 - 5x + 4 \geq 0 \Rightarrow (x-1)(x-4) \quad \begin{array}{c} 1 \quad 4 \\ + \quad | \quad - \quad | \quad + \end{array}$$

$$\Rightarrow D_f = [1, 4] \quad \text{✓}$$

$$الف) \frac{x^2 - 4x + 4}{x - 2} < 0 \Rightarrow \begin{array}{c} 1 \quad 2 \quad 2 \\ - \quad | \quad + \quad | \quad - \quad | \quad + \end{array} \quad (\mu)$$

$$(x-1)(x-2) \quad D_f = (-\infty, 1) \cup (2, +\infty) \quad \text{✓}$$

$$ب) \frac{x^2 - 1}{x^2 - 4x + 5} \geq 0 \Rightarrow \frac{(x-1)(x+1)}{(x-1)(x-5)} \quad \begin{array}{c} -1 \quad 1 \quad 5 \\ + \quad | \quad - \quad | \quad - \quad | \quad + \end{array}$$

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

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

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

$$y = \frac{a^2 - 14}{a^2 - 2a + 1} \Rightarrow \frac{(a-1)(a+1)}{(a-1)(a-1)} > 0 \quad (1)$$

$$\Rightarrow D_f = (-\infty, -1] \cup (1, +\infty)$$

$$(الف) y = \sqrt{K} - \sqrt{P-a} \quad (2)$$

$$(1) \rightarrow K - \sqrt{P-a} > 0 \Rightarrow K > \sqrt{P-a} \Rightarrow 14 > \sqrt{P-a}$$

$$(2) \rightarrow P-a > 0 \Rightarrow P > a \quad \begin{matrix} 14 > -a \\ a < 14 \end{matrix}$$

$$D_f = [-14, P]$$

$$y = \sqrt{K} - \sqrt{a-P} \Rightarrow K - \sqrt{a-P} > 0$$

$$K > \sqrt{a-P}$$

$$(1) \rightarrow a-P > 0 \Rightarrow a > P \Rightarrow 11 > a \quad \begin{matrix} a < 11 \end{matrix}$$

$$D_f = [P, 11]$$

$$(الف) y = \sqrt{K-Pa^2} \Rightarrow K - Pa^2 > 0 \Rightarrow P - a^2 > 0 \quad (3)$$

$$D_f = [-\sqrt{P}, \sqrt{P}]$$

$$ج) y = \sqrt{\mu|x| - 9} \Rightarrow \mu|x| - 9 \geq 0 \quad (4)$$

$$|x| - \frac{9}{\mu} \geq 0 \Rightarrow |x| \geq \frac{9}{\mu}$$

$$D_f = (-\infty, -\frac{9}{\mu}] \cup [\frac{9}{\mu}, +\infty) \quad \Leftrightarrow \begin{matrix} x \geq \frac{9}{\mu} \\ x \leq -\frac{9}{\mu} \end{matrix}$$

$$د) y = \sqrt[3]{\frac{|x|+1}{|x|-\mu}} \Rightarrow |x| \neq \mu \quad (5)$$

$$x \neq \pm \mu$$

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

$$هـ) y = \sqrt[3]{\frac{\sqrt{x}+1}{x-\mu}} \Rightarrow \begin{cases} x \geq 0 \\ x \neq \mu \Rightarrow x \neq 9 \end{cases}$$

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

$$و) y = \frac{\sin u}{\mu \cos u - 1} \Rightarrow \mu \cos u \neq 1 \quad (6)$$

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

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

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

$$ز) y = \frac{\cos u + 1}{\mu \sin u + 1} \Rightarrow \mu \sin u \neq -1 \Rightarrow \sin u \neq -\frac{1}{\mu}$$

$$D_f = \mathbb{R} - \left\{ \left\{ \mu k\pi - \frac{\pi}{4} \right\} \cup \left\{ \mu k\pi - \frac{5\pi}{4} \right\} \right\}$$

$$ج) y = \frac{\frac{\sin}{\cos} + 1}{\frac{\cos}{\sin} - 1} \Rightarrow \left\{ \begin{array}{l} \cot u \neq 1 \quad u \neq k\pi + \frac{\pi}{4} \quad (\wedge) \\ \Rightarrow \cos \neq \sin \quad u \neq k\pi \\ \text{من أجل } \cos \neq \sin \quad u \neq k\pi + \frac{\pi}{2} \\ \cos \neq 0 \quad \sin \neq 0 \end{array} \right.$$



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

$\cos u \neq 0 \quad u \neq k\pi + \frac{\pi}{2}$
 $\sin u \neq 0 \quad u \neq k\pi$
 $\cot u \neq 1 \quad u \neq k\pi + \frac{\pi}{4}$

$$د) y = \frac{\sin u + 1}{k \sin^2 u - k} \Rightarrow k \sin^2 u \neq k \quad \sin u \neq \pm \frac{k}{k}$$

$\mathbb{R} - \left\{ \frac{k\pi}{2}, k\pi + \frac{\pi}{2} \right\}$

$$D_f = \mathbb{R} - \left\{ k\pi + \frac{\pi}{2} \right\}$$

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

$$|u-k| > \frac{1}{k}$$

$$D_f = \left(-\infty, \frac{u}{k} \right) \cup \left(\frac{u}{k}, +\infty \right) = \left\{ \begin{array}{l} u-k > \frac{1}{k} \Rightarrow u > \frac{u}{k} \\ u-k < -\frac{1}{k} \Rightarrow u < \frac{u}{k} \end{array} \right.$$

$$هـ) y = \sqrt{k - k|u|} \Rightarrow k - k|u| \geq 0 \quad (10)$$

$$D_f = [-1, 1]$$

$$k \geq k|u|$$

$$1 \geq |u| \Rightarrow -1 \leq u \leq 1$$

✓ SEVIL

$$\rightarrow y = \sqrt{\frac{|x|}{|x|}} \Rightarrow |x| \neq 0 \Rightarrow x \neq 0$$

$$D_f = \mathbb{R} - \{0\} \quad \textcircled{v} \quad \checkmark$$