

آینا رسی صریح بویس

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☆ اگر سلف سهای ه فخر بهانی مروت نوسته شورندهی سها صفر لها ط ص سود:

۱- دامنه توابع زیر را بدست آورید

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الف) $y = \sqrt{x^2 - 1} - \sqrt{x - x^2}$

$x - x^2 \geq 0 \rightarrow -x \geq -1 - x \leq 1$

ب) $y = \sqrt{x^2 - 1} - x - 1$

$x^2 - 1 \geq 0 \rightarrow x \geq 1$

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

$\sqrt{x^2 - 1} \leq x$

$x \geq 1$

$[-1, \infty) \cap [1, \infty)$

$Dy = [-1, 1]$

$(-\infty, 1] \cup [1, \infty)$

$Dy = [1, 11]$

ج) $y = \sqrt{x^2 - 1} - x^2$

$x^2 - 1 \geq 0$

$- \sqrt{x} \leq x \leq \sqrt{x}$

$|x| - 1 \geq 0 \rightarrow x \geq 1$

$x \geq 1$

$(-\infty, 1] \cup [1, \infty)$

د) $y = \sqrt{x^2 - 1}$

$|x| + 1 \geq 0$

$|x| \neq 0$

$[0, 9] - \{1\}$

$R = \{1, 9\}$

$\sqrt{x^2 + 1}$

$\sqrt{x^2 - 1} \neq 0 \rightarrow \sqrt{x^2} \neq 1$

$$[n] \neq 0 \rightarrow n \neq [0] \quad \text{Dy} = \mathbb{R} - [0, 1] \quad \text{CV}$$

$$y = \frac{1}{x[x] \rho_{\mathbb{R}-\{0\}}}$$

[x] و x متعلق الحالات

$$y = \frac{1}{\sqrt{-x[x]}} \quad \text{بررسی است}$$

[x] و x متعلق الحالات

$$\text{Dy} = \emptyset \quad -x[x] > 0 \rightarrow x[x] < 0 = \text{CV}$$

$$y = \sqrt{\left[x - \frac{1}{p}\right] + \left[x + \frac{1}{p}\right]} \quad \left[x + \frac{1}{p}\right] \geq 1 \rightarrow \left[\frac{1}{p} + \infty\right] \wedge$$

$$\left[x - \frac{1}{p}\right] + \left[x + \frac{1}{p}\right] \geq 0 \rightarrow \left[x - \frac{1}{p} - 1\right] + \left[x + \frac{1}{p}\right] \geq 0$$

$$y = \sqrt{\left[x - \frac{1}{p}\right] + \left[-x + \frac{1}{p}\right]}$$

$$y = \sqrt{\left[x - \frac{1}{p}\right] + \left[-\left(x - \frac{1}{p}\right)\right]} \rightarrow \rho_{\mathbb{R}-\left\{x \mid x \neq \frac{1}{p}, k \in \mathbb{Z}\right\}}$$

$$y = \frac{1}{\sqrt{\sin^2 x - 1}} \quad \sqrt{\sin^2 x - 1} \neq 0$$

$$\sin^2 x \neq \frac{1}{p} \quad \text{مستبعد است}$$

$$y = \frac{\cos x + 1}{\tan x + 1} \quad \tan x + 1 \neq 0 \rightarrow \tan x \neq -1$$

$$\mathbb{R} \setminus \left[k\pi + \frac{3\pi}{4}\right] \rightarrow (k\pi, k\pi + \frac{3\pi}{4})$$

$$y = \sqrt{\sin^2 x - 1} \rightarrow \sin^2 x - 1 \geq 0$$

$$\frac{\sin^2 x}{p} \geq \frac{1}{p} \rightarrow \sin^2 x \geq 1$$

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

دستور کسی؟

$$1 - \cos^2 x \geq 0 \rightarrow \cos^2 x \leq 1 \rightarrow 1$$

الف $y = \frac{\sqrt{1-x^2}}{|x|+1}$ $\frac{1-x^2}{|x|+1} \geq 0 \rightarrow |x| \leq 1$ $(1, -1)$

بقرائن

$|x| \neq 1$ $\left[\frac{1-x^2}{|x|+1} \right] - \left[\frac{1-x^2}{|x|+1} \right]$ $Dy = [-x, x]$

ب $\frac{\sqrt{1-x^2}}{|x|+1}$

$|x| \neq 0$ $\frac{1-x^2}{|x|+1} \geq 0 \rightarrow x^2 \leq 1$ $-1 \leq x \leq 1$ $|x| \neq +1 \rightarrow x \neq \pm 1 \rightarrow [-1, 1] - \{ \pm 1 \}$

ج $y = \frac{x+1}{x^2+1}$ $(-1, 1)$

$\frac{x+1}{x^2+1} \rightarrow x+|x| > 0 \rightarrow |x| > -x \rightarrow Df = (-1, 1)$

د $y = \frac{1}{\sqrt{x|x|}} \rightarrow x|x| > 0 \rightarrow x > 0$ $(0, \infty)$

ه $y = \sqrt{1-[x]} \rightarrow \frac{1-x}{[x]} \leq 1$ $[x] \geq 0 \rightarrow Df = (-\infty, 1)$

و $y = \frac{1}{\sqrt{1-[x]}} \rightarrow 1-[x] > 0$

ز $[x] < 1 \rightarrow x < 1 \rightarrow Df = (-\infty, 1)$