

$y = \frac{r \sin^2 x + \varepsilon}{x^2 - 1} \neq 0$ روش اولی: $x^2 = -\frac{y - \varepsilon}{y - r} \rightarrow x = \pm \sqrt{\frac{y + \varepsilon}{y - r}} \geq 0$

$y = \frac{r}{-1} = -\varepsilon$

$y = \frac{r(+\infty)}{(+\infty)} = r$

$R_f: (-\infty, -\varepsilon) \cup (r, +\infty)$

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$f(x) = \frac{r \sin x + \varepsilon}{\sin x - r} \neq 0 \rightarrow \sin x \neq r$

$(\sin x)_{\min} = -1 \rightarrow f(x) = \frac{-r + \varepsilon}{-r} = -\frac{1}{r}$

$(\sin x)_{\max} = 1 \rightarrow f(x) = \frac{r + \varepsilon}{1 - r} = \frac{r}{1 - r} = -r$

$R_f: [-r, -\frac{1}{r}]$

$y = \frac{r(n-1)}{\varepsilon n}$

$y = \frac{r}{\varepsilon}$

$y = \sqrt{\frac{a(n-1)}{-n + \varepsilon n}} = \sqrt{\frac{a(n-1)}{r(n-1)}} = \frac{r}{r} = 1$

$R_f: [1, +\infty)$

$R_f: \frac{r}{r}$

$y = x|x| - rx$

$y = -x^2 - rx$

$y = x^2 - rx$

$x_{\min} = -\frac{b}{2a} = \frac{r}{-2} = -\frac{r}{2}$

$y_{\max} = -(-1) - r(-1) = 1$

$x_{\min} = -\frac{b}{2a} = \frac{r}{2}$

$y_{\min} = 1 - r = -1$

$R_f: \mathbb{R}$

$y = f(|x|) =$

$y = f(|x|) + 1 =$

$y = |f(|x|) + 1|$