

میدانی

$$f(x) = \sqrt{(a-x)x' + ax + b} \quad [1, +\infty) \quad (1)$$

$$(a - 2bx' + ax + b \geq 0 \quad a = 2)$$

$$2x + b \geq 0$$

$$b = -9$$

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

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

$$1 - m^2 \geq 0 \quad \frac{-1}{-1} + \frac{1}{-1}$$

$$(1-m)(1+m) \geq 0$$

$$1, -1 \rightarrow (2)$$

$$f(x) = \frac{\sqrt{(2-x)(2+x)} \geq 0}{[x] + [-x] + 1} \quad (3)$$

$$[x] + [-x] \neq -1$$

مخرج هر کس منفی است
مخرج هر کس مثبت است

$$\begin{array}{c} 2 \quad 2 \\ - \quad + \quad - \end{array}$$

$$\begin{array}{c} -2 \quad -1 \quad 0 \quad 1 \quad 2 \end{array} \rightarrow \bar{a}$$

$$g = \sqrt{x^3 + 1^3 x^1} \geq 0 \rightarrow x^1(x+1^3) \geq 0 \quad (1)$$

$$\begin{array}{c} \begin{array}{c} \bullet 1^3 \quad \bullet^* \\ - \quad + \quad + \end{array} \\ x=0 \quad x=-1^3 \end{array} \quad [-1^3, +\infty)$$

$$g = \sqrt{\frac{(x-1)(x+1)(x^3)(x-1^3)}{(x-1)(x^2+1+x)}} \geq 0$$

$$\begin{array}{c} \begin{array}{c} \bullet \quad \bullet^* \\ -1 \quad 0 \quad 1 \quad 1^3 \end{array} \\ + \quad - \quad - \quad - \quad + \end{array}$$

$$(-\infty, -1] \cup [1^3, +\infty) \cup \{0\}$$

$$g = \sqrt{|x-2|-1^3} \quad |x-2| \geq 1^3 \quad (a)$$

$$x-2 \geq 1^3 \rightarrow x \geq 3$$

$$x-2 \leq -1^3 \rightarrow x \leq -1$$

$$[3, +\infty) \cup (-\infty, -1]$$

$$g = \sqrt{1^3 - |1^3 - x|} \quad 1^3 - |1^3 - x| \geq 0$$

$$|1^3 - x| \leq 1^3$$

$$-1^3 \leq 1^3 - x \leq 1^3$$

$$[-1, 1] \leftarrow +1^3 \geq x \geq -1^3$$

$$y = \sqrt{1 - x|x|} \geq 0 \rightarrow x|x| \leq 1$$

$$x \leq 1$$

$$y = \frac{1}{\sqrt{1 - |x-d| - 1}}$$

$$-x \leq x-d \leq x$$

$$y \leq x \leq 1$$

$$\sqrt{1 - |x-d|} \neq 1 \rightarrow 1 - |x-d| \neq 1$$

$$[1, \infty) - \{x, y\}$$

$$|x-d| \neq 1$$

$$x \neq x, y$$

$$y = \frac{\sin x - 1}{\cos x \neq 0}$$

$$R - \{x, y + \frac{1}{y}\}$$

$$y = \frac{\cos x}{\cos x - 1}$$

$$R - \{x, y + \frac{1}{y}\}$$

$$\cos x \neq 1$$

$$\cos x \neq \frac{1}{y}$$


$$y = \frac{x+3}{|2x+1| - |x+3|}$$

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$$|2x+1| = |x+3| \xrightarrow{\text{توان ۲}} 4x^2 + 4x + 1 = x^2 + 6x + 9$$

$$x \neq -4, +9$$

$$3x^2 - 2x - 1 = 0$$

$$x^2 - 2x - 2 = 0$$

$$(x+2)(x-4) = 0$$

$$x = -2, 4$$

$$1/x - \{-4, 2\}$$

$$y = \sqrt{|2x+1| - |x+3|} \geq 0$$

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$$|2x+1| \geq |x+3| \rightarrow 3x^2 - 2x - 1 \geq 0$$

$$(-\infty, -4] \cup [2, +\infty)$$

$$-\frac{2}{3} + \frac{2}{3} = 0$$

$$f(x) = \sqrt{\log \log \frac{(2x-1)}{1}} \geq 0$$

(۹)

$$\log \frac{(2x-1)}{1} > 0$$

$$2x-1 > 1$$

$$x > 1$$

$$0 < \log \frac{(2x-1)}{1} \leq 1$$

$$x > 1$$

$$D_f = (1, 3]$$

$$2x-1 \leq 3 \rightarrow x \leq 2$$

$$y = \log(\sqrt{2}\cos\alpha + 1)$$

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$$\sqrt{2}\cos\alpha + 1 > 0 \quad \cos\alpha > -\frac{1}{\sqrt{2}}$$

$$\left(\sqrt{2}\cos\frac{\pi}{4} - \frac{\sqrt{2}}{\sqrt{2}}, \sqrt{2}\cos\frac{\pi}{4} + \frac{\sqrt{2}}{\sqrt{2}}\right)$$



$$g = \sqrt{\log \frac{x-1}{x+1}} \geq 0$$

$$\frac{x-1}{x+1} > 0$$

$$\frac{x-1}{x+1} \geq 1$$

$$\frac{-1}{+0} - \frac{1}{-0} +$$

$$\frac{x-1-x-1}{x+1} \geq 0 \quad (-\infty, -1) \cup [1, +\infty)$$

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

$$x+1 < 0$$

$$(-\infty, -1)$$

$$x < -1$$