

$$f(x) = \sqrt{(a-1)x^2 + ax + b} \geq 0$$

$$[1, 3 + \infty)$$

آنها ریشه

از خود

خارج می شود

$$f(x) = \sqrt{x^2 + 12x + 1} - m^2 \geq 0$$

$$b^2 - 4ac < 0$$

$$1 - 12m^2 < 0$$

مقادیر

های این

معادله همواره مثبت است

$$1 - m^2 < 0 \rightarrow 1 - m^2 < 1 \rightarrow m^2 < 1 \rightarrow -1 < m < 1$$

$$1 - (1 - (-1)) = 2$$

$$-1 < m < 1$$

$$f(x) = \sqrt{1 - x^2} \quad 1 - x^2 \geq 0 \rightarrow x^2 \leq 1 \rightarrow -1 \leq x \leq 1$$

$$[x] + [-x] + 1 \neq 0 \rightarrow [x] + [-x] + 1 = 1$$

اعدادی که

$$1 \Rightarrow \{-1, 0, 1\}$$

$$y = \sqrt{x^3 + 12x^2} \rightarrow x^3 + 12x^2 \geq 0 \rightarrow x^2(x + 12) \geq 0 \rightarrow x \geq 0 \text{ or } x = -12$$

$$y = \sqrt{(x^2 - 1)(x^3 - 12x^2)} \geq 0$$

$$x^2 = 1 \rightarrow x = \pm 1$$

$$x^3 - 12x^2 = 0 \rightarrow x^2(x - 12) = 0$$

$$\begin{array}{c} x \quad x \\ -1 \quad 0 \quad 1 \quad 12 \\ + \quad - \quad - \quad - \quad + \end{array}$$

$$(-\infty, -1] \cup [1, 12) \cup \{0\}$$

Given Limit

$$y = \sqrt{a-r} \cdot r \geq 0 \quad |a-r| \geq r \Rightarrow a-r \geq r$$

$$a-r \leq -r \Rightarrow a \leq -1 \quad (-\infty, -1] \cup (a, \infty)$$

$$y = \sqrt{r-|r-a|} \quad r^2 - |r-a| \geq 0 \Rightarrow |r-a| \leq r$$

$$-r \leq r-a \leq r \Rightarrow -r \leq -a \leq r \Rightarrow -r \leq a \leq r$$

$$y^2 \sqrt{1-a} |a| \geq 0 \quad -a |a| \geq -1 \Rightarrow \underbrace{a |a| \leq 1}_{\text{اذا } a \text{ بين } -1 \text{ و } 1} \quad (-\infty, 1]$$

$$y^2 = \frac{1}{\sqrt{r-|a-r|}} - 1 \neq 0$$

$$\sqrt{r-|a-r|} \neq 0 \quad r-|a-r| \geq 0 \quad |a-r| \leq r \Rightarrow -r \leq a-r \leq r$$

$$+r \leq a \leq r \Rightarrow a = r \Rightarrow [r, r] = \{r\}$$

$$y^2 \frac{\sin^2 r - 1}{\cos^2 r} = \frac{\cos^2 r}{\cos^2 r} \Rightarrow R = \left\{ r \mid r \leq r + \frac{\pi}{r} \right\}$$

$$y^2 \frac{\cos^2 r}{r \cos^2 r - 1} \quad r \cos^2 r - 1 \neq 0 \Rightarrow \cos^2 r \neq \frac{1}{r} \Rightarrow R = \left\{ r \mid r \leq r + \frac{\pi}{r} \text{ or } r \leq \frac{\pi}{r} \right\}$$

$$y^2 = \frac{r^2}{r^2 + 1} \neq 0$$

$$|r^2 + 1| = |r^2 + 1| \neq 0 \Rightarrow r^2 + 1 + r^2 = r^2 + 1 + r^2$$

$$r^2 - r^2 - r^2 = 0 \quad r^2 - r^2 - r^2 = 0$$

$$(a-r)(a+r) = 0 \quad a = \frac{r}{r} = r \quad R = \left\{ r \mid r \leq r + \frac{\pi}{r} \right\}$$

$$D = (-\infty, -\frac{r}{p}] \cup [r, \infty)$$

$$(rx+1)^r \geq (rx+r)^r$$

$$(rx+1)^r - (rx+r)^r \geq 0$$

$$|rx+1| \geq |rx+r|$$

$$y = \sqrt{|rx+1| - |rx+r|} \geq 0$$

Good limit

$$f(x) = \sqrt{\log \frac{(rx-1)}{rx-1} \log \frac{rx-1}{rx-1}} \geq \frac{1}{p}$$

$$y = \log(rx+1) \quad rx+1 > 0 \rightarrow rx > -1 \rightarrow -\frac{1}{p} \leq rx < \frac{1}{p}$$

$$y = \sqrt{\log \frac{rx-1}{rx+1}} \geq 0 \rightarrow \frac{rx-1}{rx+1} \geq 1 \rightarrow \frac{rx-1-(rx+1)}{rx+1} \geq 0$$

$$\log \frac{-1}{rx+1} \geq 0 \quad rx+1 < 0 \quad rx < -1 \rightarrow D = (-\infty, -1)$$

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