

$$f(x) = \sqrt{\log \log^{(r-1)} x}$$

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$$r-1 > 1 \Rightarrow r > 2 \Rightarrow x > 1 \Rightarrow x > 1$$

$$r-1 < 1 \Rightarrow r < 2 \Rightarrow x < 1 \Rightarrow x < 1$$

$$\log \log^{(r-1)} x$$

$$r-1 < 1 \Rightarrow r < 2 \Rightarrow x < 1 \Rightarrow x < 1$$

$$Df = (1, 3]$$

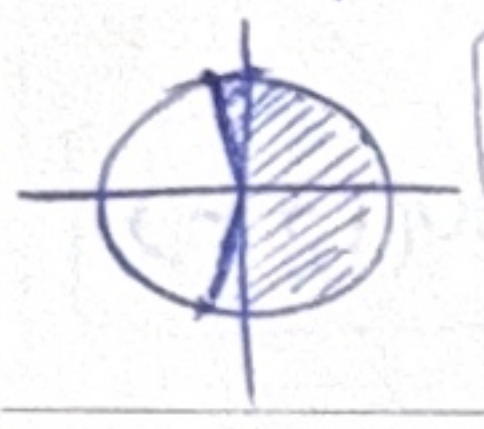
$$y = \log(r \cos x + 1)$$

$$y = \sqrt{\log \frac{x-1}{x+1}}$$

$$r \cos x + 1$$

$$r \cos x - 1$$

$$\cos x = \frac{1}{r}$$



$$Df = \mathbb{R} - [rk\pi + \frac{r\pi}{r}, rk\pi + \frac{r\pi}{r}]$$

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

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

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

$$\frac{x-1-x-1}{x+1} = \frac{-2}{x+1}$$

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

$$Df = (-\infty, -1]$$

$$f(x) = \sqrt{(a+r)x^2 + ax + b} = (-\infty, \mu] \Rightarrow b = ?$$

$$Df \rightarrow (-\infty, \mu] \Rightarrow$$

$$\text{if } a = -r = \sqrt{-rx + b}$$

$$-rx + b \geq 0 \Rightarrow \text{if } x = \mu \Rightarrow -r\mu + b = 0 \Rightarrow b = r\mu$$

$$b = r\mu = \sqrt{-rx + 4} \Rightarrow Df = \frac{\mu}{+} \frac{r}{-} (-\infty, \mu]$$

$$b = 4$$

$$f(x) = \sqrt{x^2 + rx + r - m^2} \quad Df = \mathbb{R}$$

$$\Delta f \rightarrow f - f(r-m^2) = f - 1 + \epsilon m^2 = f - m^2 - r$$

$$\Delta f \Rightarrow f - m^2 - r < 0 \Rightarrow f(m^2 - 1) < 0 \quad m = \pm 1 \quad 1 - (-1) = 2$$

$$f(x) = \frac{\sqrt{f - x^2}}{[x] + [-x] + 1}$$

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

$$\text{if } x \in \mathbb{Z} \rightarrow f(x) = 0 \Rightarrow x \in \mathbb{Z}$$

$$\text{if } x \notin \mathbb{Z} \rightarrow f(x) = -1$$

$$f - m^2 y \quad x^2 \in \mathbb{C} \Rightarrow -r \leq x \leq r$$

$$Df = \{x \mid x \in \mathbb{Z}, -r \leq x \leq r\}$$

$$Df = \{-r, -1, \dots, 1, r\}$$

مجموعه