

$$\begin{cases} |2n-1-n+1| \leq n & n \geq 1 \\ f_{n+2}-n+1 = f_{n+1} & n < 1 \end{cases} \rightarrow f_{n+1} \geq 0 \rightarrow n \geq \frac{-f}{2}$$

$$D_f = \left[ \frac{-f}{2}, +\infty \right)$$

$$\frac{f(n^2 + \frac{1}{n})}{f(n^2 + n + \frac{1}{n})} = \frac{3 \times (n + \frac{1}{n})^2}{2 \times (n + \frac{1}{n})^2} = \frac{3}{2n+1}$$

$$D_f = \mathbb{R} - \left\{ \frac{1}{2} \right\}$$

$$\frac{(n-1)(n+1)(n+2)}{(n-1)(n+1)} \leq n+2 \Leftrightarrow 1 \leq n+2 \quad f(1) \leq 2 \quad f(-1) = 1$$

$$\frac{a+2}{1+b} \leq 2 \quad \frac{-a+2}{b-1} \leq 1 \Rightarrow -a+2 \leq b-1 \Rightarrow a \leq b+3$$

$$\Rightarrow \frac{a-b}{1+b} \leq 2 \Rightarrow b \leq \frac{1}{2} \quad \boxed{\frac{1}{2} + \frac{3}{2} \sqrt{\frac{1}{2}}}$$

$$c=1 \quad (n-1)^2 \leq n^2 - f_{n+1} \quad b=1 \quad a \leq -2$$

$$|f| + (-2) \leq 0$$

$$(n-2)^2(n) + (-n-2)^2(-n) = n^3 - f_{n+1} + f_{n-2} - f_{n+1} - f_n$$

$$g(n) = -1n^2$$

$$(1-rn \leq r \rightarrow n \leq -1) \Rightarrow \sqrt{-1+r} \leq 1$$

$$(1-rn \leq -1 \rightarrow n \leq -1) \Rightarrow \sqrt{1-r} \leq 1 \quad \left. \begin{array}{l} f+1 \leq d \end{array} \right\}$$

$$n + \sqrt{n} \leq y \rightarrow n \leq f$$

$$f + r \times f \leq r \Delta y + 1 \leq r \Delta y \wedge$$

$$f(n) \leq n(n^r + 1) \quad (n-1)(n^r - rn + r) + (1-n)(n^r - rn + r) \leq 0$$

$$rf - y \leq r\sqrt{fm - ra} \wedge K - r - \sqrt{b - fm} \leq rK \leq r\sqrt{fm - ra} - \sqrt{b - fm} \quad -K - r$$

$$\Rightarrow ra \leq b \leq f$$

$$\underbrace{m \leq 1}_{-K-r \leq K} \rightarrow rK \leq r \rightarrow K \leq -1$$

$$ra - \frac{b}{r} - K \leq r - r + 1 \leq r$$

$$m = V \quad \sqrt{V-r} + m - \sqrt{r \times r + r} \leq y \sqrt{r} \rightarrow n \leq \wedge \sqrt{r-r}$$

$$n + m \leq \wedge \sqrt{r-r} + V \leq \wedge \sqrt{r-r} + d$$