

$$f(n) = \left(\frac{1}{n}\right)^{n-2} - 1 \Rightarrow y = \sqrt[n]{n^2 f(n+1)} \geq 0 \quad \left(\frac{1}{n}\right)^{n-2} - 1 \geq 0 \Rightarrow \left(\frac{1}{n}\right)^{n-2} \geq 1$$

$$f(n) = \sqrt[n]{n^2 f(n+1)} \Rightarrow \sqrt[n]{n^2 f(n+1)} \geq 1 \Rightarrow \begin{cases} -2n+2 \geq 0 \\ -2n+2 \leq 0 \end{cases} \Rightarrow -2n+2 \geq 0$$

$$y = \sqrt[n]{\frac{n-1}{f(n)}} \Rightarrow \textcircled{1} \quad D_f = (-\infty, 1] \cup (2, \infty)$$

$$V_1 = \frac{1}{9n^2 - 4n^2 - 4n - 2} \quad D_{fV_1} = D_{fV_2} \quad V_2 = \frac{1}{3n^2 + 4n + 2} \quad \sqrt{-(a+b)} = ?$$

$$V = n^2 + n \Rightarrow y = \sqrt{f(n) - f\left(\frac{1}{n}\right)} \Rightarrow n^2 + n - \left(\left(\frac{1}{n}\right)^2 + \frac{1}{n}\right) \Rightarrow n^2 + n - \frac{1}{n^2} - \frac{1}{n} \geq 0$$

$$f(2) + f(1) \Rightarrow f(n^2 + n) = 2n^2 - 1 \Rightarrow f(2) + f(1) = 1$$

$$y = n^2 + n \Rightarrow \textcircled{1} \Rightarrow f(y) = y - 1 = \textcircled{1}$$

$$1 = n^2 + n \Rightarrow y \Rightarrow f(1) = y$$

$$f(n) = n^2 - 4n^2 + 4n \quad g(n) = n^2 + 4n^2 + 4n$$

$$\frac{g(\sqrt{y} - 2)}{f(\sqrt{y} + 2)} \Rightarrow \frac{-2}{1} = -2$$

$$f(n) = \sqrt{n^2 + 4n - 4} + 2 \quad g(n) = \sqrt{n^2 - 4n + 4} + 2$$

$$f(n) \cdot g(n) = a + b\sqrt{n} + c$$

$$\frac{a+b}{c} \Rightarrow \frac{0+2}{-4} = -\frac{1}{2}$$

$$n > 1 \quad \sqrt{n-4} + 2 + \sqrt{n-4} - 2 \Rightarrow 2\sqrt{n-4}$$

$$g(n) = \{(4, 1), (1, 0), (2, 5), (0, 9)\}$$

$$f(n) = \frac{n+2}{n^2 - 4n + 2}$$

$$f(2) = \frac{4}{-1}$$

$$\frac{g}{f} = \left\{ \left(2, \frac{1}{-4}\right), \left(0, \frac{9}{2}\right) \right\}$$

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

$$f(0) = \frac{2}{2}$$

$$f(n) = \{(\underline{1}, \underline{2}), (\underline{2}, \underline{-1}), (\underline{4}, \underline{2}), (\underline{-1}, \underline{4})\}$$

$$g(n) = \{(-2, 3), (\underline{1}, \underline{-1}), (\underline{3}, \underline{2}), (\underline{-1}, \underline{0})\}$$

$$f(n) = \{(\frac{1}{4}, 2), (\frac{3}{2}, -1), (2, 2), (-\frac{1}{2}, 4)\}$$

$$2n = 1$$

$$f(n^2) = \{(-1, 4), (1, 2), (\sqrt{3}, -1), (-\sqrt{3}, -1), (-2, 2), (2, 2)\}$$

$$n^2 = 1$$

$$2g(n) + 1 = \{(-2, 19), (1, 3), (3, 9), (-1, 1)\}$$

$$\frac{2f}{g} \Rightarrow \{(1, \frac{4}{3}), (3, \frac{-2}{3})\}$$

$$9n^4 - 7n^2 - 6n - 3 \Rightarrow (9n^4 - 6n^2 + 1)(-n^2 - 6n - 3)$$

$$(3n^2 - 1)^2 = (n + 2)^2 \Rightarrow 3n^2 - 1 = n + 2 \Rightarrow 3n^2 - n - 3$$

$$\sqrt{-(-19 - 3)} = \frac{2}{5}$$

$$a = -1 \quad b = 3$$

سوال 4
ریشه ها