

$$y = \sqrt{f(x)} \cdot x_{n+1} \rightarrow f(x) \cdot x_{n+1} \begin{cases} [x] \left(\begin{matrix} f(x_{n-1}), x_{n-1} \rightarrow x_n \end{matrix} \right) \textcircled{A} \\ f(x_n), x_{n-1} \rightarrow f(x_n) \cdot x_n \rightarrow x_n \cdot \frac{x}{x} \textcircled{B} \end{cases}$$

$(-\infty, \infty)$ $\textcircled{C}$

$\textcircled{1} \cap \textcircled{2} : (\omega, +\infty)$ $\textcircled{2}$

$\textcircled{2} \cap \textcircled{3} = \left[\frac{x}{x}, \omega \right)$

$$A \cup B = \left[\frac{x}{x}, \omega \right)$$

$$y = \frac{x^2 + x^2 + 1}{(x^2 + x + 1)^2} = \frac{x^2(1 + 1) + 1}{(x^2 + x + 1)^2} = \frac{x^2(2) + 1}{(x^2 + x + 1)^2} = \frac{2x^2 + 1}{(x^2 + x + 1)^2} = \frac{x}{x^2 + 1}$$

$x_{n+1} = \dots$
 $x = \frac{1}{x}$

$D = B \left[\frac{1}{x} \right]$

$\textcircled{2}$

$$\frac{x^2 + x^2 - x - x}{x^2 - 1} = \frac{(x-1)(x+1)(x+1)}{(x-1)(x+1)} = x+1$$

$x+1 = x+1 \rightarrow C \checkmark \rightarrow g(x) = x+1$

$$\left. \begin{aligned} x=1 &\rightarrow \frac{a+x}{1+b} = 1 \rightarrow x+b = a+x \\ x=-1 &\rightarrow \frac{-a+x}{-1+b} = 1 \rightarrow b-1 = -a+x \end{aligned} \right\} \rightarrow \begin{aligned} a &= x+b \\ b &= x \end{aligned}$$

$b+c = x+b$

$$g(x) = f(x) \rightarrow \frac{x^2-1}{x^2+bx+c} = \frac{x+1}{x-c} \rightarrow \frac{(x+1)(x+1)}{(x-1)(x-1)} = \frac{x+1}{x-1}$$

$a = x$
 $b = 1$

$a+b+c = 1+x \checkmark$

$\textcircled{2}$

$$f(x+1) = (x-1)f(x) = (x^2 - x + 1)x = x^3 - x^2 + x$$

$$f(-x) = (-x-1)f(-x) = -x^3 - x^2 - x$$

$\frac{x}{x} = 1 \checkmark \rightarrow g(x)$

$\textcircled{2}$

$$1. r_n = -1 \rightarrow r_n = r_{n-1} = 1$$

$$1. r_n = 1 \rightarrow r_n = -1 \rightarrow r_{n-1} = 1$$

$$f(x) = \sqrt{x+1} = \sqrt{-1+1} = 0 \quad \checkmark$$

$$f(-1) = f(\sqrt{x}) = \sqrt{-1} = \sqrt{-1} = \sqrt{-1} \quad \checkmark$$

$$\left. \begin{array}{l} f(x) = \sqrt{x+1} \\ f(-1) = f(\sqrt{x}) \end{array} \right\} \text{L.E. } \omega \quad \checkmark$$

$$n, \sqrt{n} = 4 \rightarrow \sqrt{n} = 4$$

$$f(y) = (f)^k \circ f(f) = f(y+1) = f(y+1) \quad \checkmark$$

$$f(n-1) + f(1-n) = (n-1)^k + (n-1) + (1-n)^k + (1-n) = \frac{n^k - 1}{n-1} + \frac{1 - n^k}{1-n} = \frac{n^k - 1}{n-1} + \frac{n^k - 1}{n-1} = \frac{2(n^k - 1)}{n-1} \quad \checkmark$$

$$\left. \begin{array}{l} r_a - f_a \rightarrow a = \frac{f}{p} \\ b - f_b \rightarrow b = \frac{f}{p} \end{array} \right\} \begin{array}{l} \text{بزرگ} \\ \text{صغر} \end{array} \quad r_f - g(1) = k, \quad r_k - r_k = k \rightarrow k = \frac{f}{p} \quad \checkmark$$

$$r_a - \frac{b}{p} k = 1 - r + f \quad \checkmark$$

$$r_{n+1}, \quad n \rightarrow 1 \quad n \rightarrow n \rightarrow n = V$$

$$\text{mod } [1, V]$$

$$f-g(x) = \sqrt{V-x} + n - \sqrt{4+x} = 4\sqrt{x} \rightarrow r_n - r\sqrt{x} = 4\sqrt{x} \rightarrow n = 4\sqrt{x} + r\sqrt{x} = 1\sqrt{x} \quad \checkmark$$

$$m+n = V + 1\sqrt{x} = 1\sqrt{x} \quad \checkmark$$