

حاصل و غیره $y = \sqrt{n^2(a+1)}$ $P(n) = \left(\frac{1}{n}\right)^{n+1} - 1$

$\rightarrow \sqrt{n^2 \left(\left(\frac{1}{n}\right)^{n+1} - 1\right)} \rightarrow \sqrt{n^2 \left(\frac{1}{n^{n+1}} - 1\right)}$ $\frac{0}{-0+0} \rightarrow P = [0, 1]$

$\rightarrow f(-n) = \sqrt{-n + |n+1|}$ $f(n) = \sqrt{n + |n+1|}$

$\rightarrow 1 + y = -2n + 2$ $P_f = (-1, 1]$

$y = \sqrt{\frac{n-1}{f(n)}}$ $P_f = (-1, 1] \cup (2, 3)$

$y_1 = \frac{1}{9n^2 - 7n^2 - 5n - 3}$

$9n^2 + an + b = 0 \times 9n^2 \rightarrow 9n^2 + 3an^2 + 3bn$

$6(3n^2 - 1)^2 - (n+2)^2 = (3n^2 - 1 - n - 2)(3n^2 - 1 + n + 2)$

$a = -1 \quad b = -3 \Rightarrow \sqrt{4} = 2$

$\rightarrow \sqrt{9n^2 + n - \frac{4}{n^2} - \frac{3}{n}}$ $f(n) = 9n^2 + n$

$(9n - \frac{4}{n})(9n^2 + \frac{14}{n} + 5) + 9n - \frac{3}{n} \rightarrow (9n - \frac{4}{n})(9n^2 + \frac{14}{n} + 5) \rightarrow \frac{-2}{0} + \frac{2}{0}$

$f(r) + f(1) \rightarrow f(n^2 + n) = 9n^2 - 1$

$9n^2 + n = 1 \rightarrow (9n^2 + 1)n = 1 \rightarrow n = 2 \rightarrow f(2) - 1 = 7$

$9n^2 + n = 2 \rightarrow 9n^2 + n - 2 = 0 \rightarrow n = 1 \rightarrow f(1) - 1 = 1$

$$f(x) = \frac{g(\sqrt{x}-1)}{f(\sqrt{x}+1)} \quad \text{حيث } g(x) = \frac{x^2 + 9x + 14}{(x+1)^2 - 1} \quad f(x) = \frac{x^2 - 9x + 14}{(x-1)^2 + 1}$$

$$\left. \begin{aligned} g(\sqrt{x}-1) &= (\sqrt{x})^2 - 1 = -1 \\ f(\sqrt{x}+1) &= (\sqrt{x})^2 + 1 = 1 \end{aligned} \right\} \frac{-1}{1} = -1$$

$$f(x) + g(x) = \frac{a+b\sqrt{x}+c}{\sqrt{x}-\varepsilon}, \quad g(x) = \sqrt{x-\varepsilon}\sqrt{x-\varepsilon}, \quad f(x) = \sqrt{x+\varepsilon}\sqrt{x-\varepsilon}$$

$$(\sqrt{x-\varepsilon} + 1)^2 = x - \varepsilon + \varepsilon\sqrt{x-\varepsilon} + 1 \rightarrow \sqrt{x-\varepsilon} + 1 = \sqrt{x-\varepsilon} + 1$$

$$x - \varepsilon\sqrt{x-\varepsilon} = (\sqrt{x-\varepsilon} - 1)^2 = x - \varepsilon - \varepsilon\sqrt{x-\varepsilon} + 1 \rightarrow \sqrt{x-\varepsilon} = \sqrt{x-\varepsilon} - 1$$

$$\frac{0+1}{b} \rightarrow \frac{0+1}{-1} = -1$$

$$P_f \cap P_g = \left\{ \left(\frac{1}{2}, 0 \right) \right\} \rightarrow \frac{g}{f} = \left\{ \left(1, \frac{1}{2} \right), \left(0, \frac{1}{2} \right) \right\}$$

$$f(x) = \frac{x}{-1} = -x$$

$$f(0) = \frac{1}{1}$$

$$g(x) = \left\{ (1, 1), (2, 1), (3, 1), (4, 1) \right\}$$

$$f(x) \rightarrow \left\{ \left(\frac{1}{2}, 1 \right), \left(\frac{3}{2}, -1 \right), (2, 1), \left(-\frac{1}{2}, 1 \right) \right\}$$

$$\rightarrow f(x^2) \rightarrow \left\{ (1, 1), (\sqrt{3}, -1), (2, 1), (-1, 1), (-\sqrt{3}, -1), (-2, 1) \right\}$$

$$g(x^2 + 1) \rightarrow \left\{ (-2, 1), (1, 1), (2, 1), (1, 1) \right\}$$

$$\frac{f}{g} \rightarrow \left\{ (1, -1), \left(2, \frac{-1}{2} \right), \left(-1, \frac{1}{2} \right) \right\}$$