

$$\frac{n-1}{n} - \frac{n}{n-1} \geq 0 \quad \frac{(n-1)^2 - n^2}{n(n-1)} \geq 0 \quad \frac{-2n+1}{n(n-1)} \geq 0 \quad + \frac{0}{n} - \frac{1}{n-1} + \frac{1}{n} -$$

$$n+1 \neq 0 \quad (n \neq -1) \quad D_f = (-\infty, 0) \cup \left[\frac{1}{2}, 1\right)$$

$$(n \neq 0) \quad n-1 \neq 0 \quad (n \neq 1) \quad \frac{1}{n-1} + \frac{1}{n+1} \neq 0 \quad \frac{1}{n+1} + \frac{n-1}{n+1} \neq 0 \quad \frac{-5}{2} \quad \frac{1}{n+1} + \frac{1}{n+1} \neq 0$$

$$n+1 \neq 0 \quad (n \neq -1) \quad D_f = \mathbb{R} - \left[-\frac{1}{2}, -\frac{1}{2} + \frac{1}{2}\right] \cup \left[\frac{1}{2}, 1\right]$$

$$\left[\left(\frac{1}{n}\right)^2 - 1\right] \left(\frac{1}{n} - \frac{1}{n}\right) \geq 0 \quad + \frac{1}{n} + \frac{1}{n} + \frac{1}{n} \quad D_f = (-\infty, -\frac{1}{2}] \cup \left[\frac{1}{2}, \infty\right)$$

$$\sqrt{y+1} = \sqrt{1-\sqrt{n-1}} \quad \text{برابر است}$$

$$\text{I} \quad \sqrt{1-\sqrt{n-1}} \geq 0 \quad \text{II} \quad \sqrt{1-\sqrt{n-1}} \leq 1 \quad n-1 \leq 1 \quad (n \leq 2)$$

$$\text{III} \quad n-1 \geq 1 \quad (n \geq 2) \quad D_f = [1, 2]$$

$$\text{I} \quad n^2 - n - 1 \geq 0 \quad \frac{1}{n-1} - \frac{1}{n+1} \quad \text{II} \quad \sqrt{n^2-1} + 1 \neq 0$$

$$\text{III} \quad n^2 - 1 \geq 0 \quad n^2 \geq 1 \quad (n \geq 1) \quad (n \leq -1) \quad D_f = (-\infty, -1) \cup (1, +\infty)$$

$$-1 \rightarrow \frac{1}{n} \quad 1 - 2a - f = 0 \rightarrow 2a = 1 \quad a = -\frac{1}{2}$$

$$-n^2 - \frac{1}{2}n + 1 \rightarrow \left(a - \frac{1}{2}\right)(n+1) \quad b = \frac{1}{2}$$

$$a+b=1$$

$$\text{if } n \geq 1 \quad g(n) = \sqrt{2n-1} \rightarrow 2n-1 \geq 0 \quad (n \geq \frac{1}{2})$$

$$\text{if } n < 1 \quad g(n) = \sqrt{n+1} \rightarrow n+1 \geq 0 \quad (n \geq -1) \quad n \geq 1$$

$$\sin \frac{\pi}{2} + \cos \frac{\pi}{2} = \frac{\sqrt{v}+1}{v} = \frac{\sqrt{v}+1}{v}$$

$$f\left(\frac{\sqrt{v}+1}{v}\right) = \cancel{x} \times \frac{v+\sqrt{v}}{\cancel{x} \cdot v} - \cancel{v}\sqrt{v} + \cancel{1} = \frac{v+\sqrt{v}-\sqrt{v}+1}{v} = \frac{1+1}{v} = \frac{2}{v}$$

$$f(a) = \frac{a+1}{a-1} \rightarrow f(f(a)) = \frac{\frac{a+1}{a-1}+1}{\frac{a+1}{a-1}-1} = a \quad (a \neq 1)$$

$$D_f = \mathbb{R} - \{1\}$$

$$u^v - f u = -f \quad u^v - f u + f = 0$$

$$(u-f)^v$$

$$(f)^v \rightarrow g(a) = v$$

$$\sqrt{u^v-1} = v \quad u^v-1=f \quad u^v=a \quad \boxed{u = \pm \sqrt{a}}$$

$$f(-v) \xrightarrow{u=-v} f(-v) = v^v + v^0 + v = vv$$

$$f(v) \xrightarrow{u=1} 1 - a + v = v$$

$$\boxed{x \times v^v = 1 \text{ if } v}$$

$$f \cos^v u + a \cos^v u = \frac{v}{v}$$

$$f A^v + a A - \frac{v}{v} = 0 \quad (1f)$$

$$\cos^v u = \frac{1}{v}$$

$$\tan^v u = v$$

$$\cos^v u = \frac{1}{v} \quad (A+v)(A-v)$$