

پروین اختر اعظمی فیاضیہ رسم بہ A - کالیفرنیا لک

① $f(x) = \frac{1}{x}$ ② $\frac{n-1}{n} - \frac{n}{n-1} = \frac{n^2 - n - n^2 + 1}{n(n-1)} = -\frac{1}{n}$
 $f(n)$ $\frac{1}{n}$ $\frac{1}{n-1}$
 $+$ $+$ $+$ $-$
 $D_f = (-\infty, 0) \cup [\frac{1}{n}, 1)$

$$\begin{aligned} \text{ریشه های صورت} & \quad x^2 - 10 = 0 \\ \text{ریشه های مخرج} & \quad x^2 - 2 = 0 \end{aligned}$$

$$Df = IR - \begin{pmatrix} -1, 0, 1, -r, -\frac{a}{r} \end{pmatrix} \frac{r_{n+1} + a}{r_{n+1} + r_n - 1} \neq 0 \Rightarrow n \neq \frac{-a}{r}$$

(الف)

$$r^{-q} - q = 0 \quad r^{-q} = q \quad n = -r$$
$$\frac{r}{r^q} = r^n \quad n = \frac{q}{r}$$

(د)

$$P(s) = (-\infty, -r] \cup [\frac{q}{r}, \infty)$$

① $n-1 \geq 0 \quad n \geq 1$
 ② $\sqrt[n]{n-1} \geq 0 \Rightarrow \sqrt[n]{n-1} \leq n \quad \left. \begin{array}{l} \sqrt[n]{n-1} \geq 0 \\ \sqrt[n]{n-1} \leq n \end{array} \right\} \text{Def} [1, nr]$
 $\hookrightarrow n-1 \leq n \quad n \leq nr$

① $n^r - 1 \geq 0 \Rightarrow \begin{matrix} n \geq 1 \\ n \leq -1 \end{matrix}$ ② $\sqrt{n^r - 1} + 1 \neq 0 \checkmark$

③ $u^r - u - r > 0 \Rightarrow (u - r)(u + 1) > 0 \Rightarrow$

$D_f = (-\infty, -1) \cup (r, \infty)$

$\begin{matrix} u > r \\ u < -1 \end{matrix}$

$$r_{cm} \quad \begin{array}{c} a \\ - \\ 1 \end{array} \quad \begin{array}{c} -r \\ + \\ 0 \end{array} \quad \begin{array}{c} b \\ - \\ 1 \end{array} \quad \begin{array}{c} -r \\ - \\ 0 \end{array} \quad \begin{array}{c} -r \\ - \\ 0 \end{array} \Rightarrow r_{cm} - r = 0$$

$$r_{cm} - 1 \quad a = -\frac{1}{r}$$

$$\sqrt{-ar - \frac{a}{r} + r} = f_{cm}$$

$$(r_{cm}r + a - \frac{1}{r}) = 0 \Rightarrow (ar + a - 1/r) = 0$$

$$\hookrightarrow (- (r_m r + u - \frac{r}{r}) = 0 - (u r + u - (r)) \leq 0 \quad \sqrt{-u r - \frac{u}{r} + r} = f(u)$$

$$(u + \frac{\epsilon}{r})(u - \frac{r}{r}) - r, \frac{r}{r} \quad a+b = -\frac{1}{r} + \frac{r}{r} \leq 1$$

$$\frac{r_m}{r_n - r} \geq 0, \text{ and } (n, 1) \neq$$

$$r_n + r_{n+1} = 2r_{n+1} \quad \checkmark$$

$$-n \quad g(n) = \frac{\sqrt{r_n - r}}{\sqrt{n + r}}$$

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$$m < 1 \Rightarrow -\frac{1}{m} < m < 1$$

$$V \Rightarrow D_f \in [-r, \infty)$$

$$\sin \frac{\pi}{3} = \frac{\sqrt{r}}{r}$$

$$\cos \frac{\pi}{3} = 1$$

$$f\left(\frac{\sqrt{r}}{r} + 1\right) = f\left(\frac{\sqrt{r} + r}{r}\right)$$

$$r \left(\frac{\sqrt{r} + r}{r}\right)^2 - c \left(\frac{\sqrt{r} + r}{r}\right) = r \left(\frac{\sqrt{r} + r}{r}\right)$$

$$\sqrt{r} \frac{\sqrt{r} + r}{r} \left(\frac{\sqrt{r} + r}{r}\right) = \frac{r - r}{r} = \frac{-1}{r}$$

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

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

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

اگر $a+d=0$ ، $\Rightarrow f \circ f(n) = n$

$$a+d=0, \Rightarrow f \circ f(n) = n$$

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

$$1R - \{1\}$$

$$g(a) = \sqrt{a^2 - 1}$$

$$f(g(a)) = f(\sqrt{a^2 - 1}) = (\sqrt{a^2 - 1})^2 - c(\sqrt{a^2 - 1}) = -c$$

$$Dg = (-\infty, -1] \cup [1, \infty)$$

$$Df = \mathbb{R}$$

$$g(a)^2 - c(g(a)) + c = 0$$

$$(g(a) - r)^2 = 0 \Rightarrow g(a) = r$$

$$\sqrt{a^2 - 1} = r$$

$$a = \pm \sqrt{r^2 + 1}$$

$$n+r=t \Rightarrow n=t-r \Rightarrow f(t) = (t-r)^2 - a(t-r) + c$$

$$t^2 - 4t + 9 - at + 12 + c = t^2 - 11t + r_0$$

$$f(r) = r$$

$$f(-r) = 9 + 4r + r_0 = 4$$

$$4 + r = 11 + r_0$$

$$n+r=r \Rightarrow n=1$$

$$n+r=-r \Rightarrow n=-4$$

$$1 - 4 + 4 = r$$

$$4 + r_0 + 4 = 4$$

$$r_0 = r \cos^2 u + a \cos u$$

$$\times r$$

$$r \cos^2 u + a \cos u - r = 0$$

$$\cos^2 u + \frac{a}{r} \cos u - 1 = 0$$

$$\left(\cos u + \frac{1}{r}\right) \left(\cos u - \frac{1}{r}\right)$$

$$-\frac{1}{r} \times \frac{1}{r}$$

$$\frac{1}{r}$$

$$\tan^2 u = \frac{1}{\cos^2 u} - 1 = r$$

$$\cos^2 u + a \cos u - 1 = 0 \Rightarrow \cos u = \frac{-a \pm \sqrt{a^2 + 4}}{2}$$