

$$y = \frac{n+1}{n^3 + 1} = \frac{n+1}{(n+1)(n^2 - n + 1)} = \frac{1}{n^2 - n + 1} \quad (n \neq -1)$$

$n \neq \frac{1}{p}$ $n \neq -1$ $n \neq 1$ $R = \{1, \frac{1}{p}, -1\}$ $\Delta = n^2 - n + 1$ $\Delta = 1 - 4 = -3$ $\Delta < 0$ $n^2 - n + 1 = 0$ $(n+1)(n^2 - n + 1) = 0$ $n = -1$ $n = 1$ $n = \frac{1}{p}$

$$y = \frac{n+1}{n^3 + 1} = \frac{n+1}{(n+1)(n^2 - n + 1)} = \frac{1}{n^2 - n + 1}$$

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$$y = \frac{n+1}{n^3 - 1} = \frac{n+1}{(n-1)(n^2 + n + 1)}$$

$n \neq 1$ $R = \{1\}$ $\Delta = n^2 + n + 1$ $\Delta = 1 + 4 = 5$ $\Delta > 0$ $n^2 + n + 1 = 0$ $(n-1)(n^2 + n + 1) = 0$ $n = 1$ $n = \frac{-1 \pm \sqrt{5}}{2}$

$$y = \sqrt{\frac{n+1}{n^3 - 1}} = \sqrt{\frac{n+1}{(n-1)(n^2 + n + 1)}}$$

$(-\infty, -1) \cup (1, \infty) = D_f$ $n \neq 1$ $n \neq \frac{-1 \pm \sqrt{5}}{2}$

$$y = \frac{n}{n^3 - 1} = \frac{n}{(n-1)(n^2 + n + 1)}$$

$n \neq 1$ $R = \{1\}$ $\Delta = n^2 + n + 1$ $\Delta = 1 + 4 = 5$ $\Delta > 0$ $n^2 + n + 1 = 0$ $(n-1)(n^2 + n + 1) = 0$ $n = 1$ $n = \frac{-1 \pm \sqrt{5}}{2}$

$$y = \sqrt{[n] - 1} \quad [n] \geq 1 \Rightarrow n \leq -1 \quad D_f = (-\infty, -1]$$

$$y = \frac{a n^2 + 1}{[n] - 1} \quad ([n] - 1) \neq 0$$

$R = (-\infty, 1) \cup (1, \infty)$ $[n] \neq 1$ $[n] \neq 0$ $n \neq 1$ $n \neq 0$ $n \neq \frac{1}{p}$

$$y = \sqrt{[n - \frac{1}{p}] + [n + \frac{1}{p}]} = \sqrt{2[n + \frac{1}{p}] - 1}$$

$D_f = [\frac{1}{p}, \infty)$ $[n + \frac{1}{p}] \geq 1$ $[n - \frac{1}{p}] \geq 1$ $n + \frac{1}{p} \geq 1$ $n - \frac{1}{p} \geq 1$ $n \geq \frac{1}{p}$ $n \geq \frac{1}{p}$

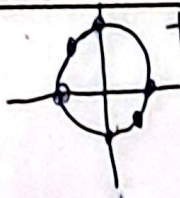
$$y = \sqrt{[n - \frac{1}{p}] + [\frac{1}{p} - n]}$$

$[t] + [-t] = 0$ $t \in \mathbb{Z}$

$$\Rightarrow n - \frac{1}{p} \in \mathbb{Z} \quad D_f = \{n | n = k + \frac{1}{p}, k \in \mathbb{Z}\} \quad [t] + [-t] = 0 \text{ if } t \in \mathbb{Z}$$

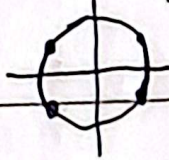
تعريف سود

$$y = \frac{\cot n + 1}{\tan m + 1}$$



$$D_f = R - \left\{ \frac{k\pi}{p}, k\pi - \frac{\pi}{p} \right\}$$

$$y = \sqrt{1 - r \sin^p m}$$



$$r \sin^p m \leq 1 \Rightarrow \frac{1}{r} \leq \sin m \leq \frac{1}{r}$$

$$D_f = \left[\frac{k\pi - \frac{\pi}{p}}{r}, \frac{k\pi + \frac{\pi}{p}}{r} \right] \cup \left[\frac{k\pi + \frac{\pi}{p}}{r}, \frac{k\pi + \frac{\pi}{p}}{r} \right]$$

$$y = \sqrt{r \sin m - 1}$$



$$r \sin m > 1$$

$$\sin m > \frac{1}{r}$$

$$\left[\frac{k\pi + \frac{\pi}{p}}{r}, \frac{k\pi + \frac{\pi}{p}}{r} \right]$$

$$D_f = \left[\frac{k\pi + \frac{\pi}{p}}{r}, \frac{k\pi + \frac{\pi}{p}}{r} \right]$$

$$y = \sqrt{1 - r \cos m}$$



$$r \cos m \leq 1$$

$$\cos m \leq \frac{1}{r}$$

$$D_f = \left[\frac{k\pi - \frac{\pi}{p}}{r}, \frac{k\pi + \frac{\pi}{p}}{r} \right]$$

$$y = a r \sin(n^p + m^p + 1)$$

$$\Rightarrow -1 \leq n^p + m^p + 1 \leq 1$$

$$\frac{n^p + m^p}{p} \leq 0$$

$$\frac{n^p + m^p}{p} \leq 0$$

$$D_f = [-1, 0] \cap (-\infty, -1] \cup [-1, 0]$$

$$D_f = [-1, -1] \cup [-1, 0]$$

$$\cos y = \sqrt{a - r m}$$

$$\sqrt{a - r m} \leq 1$$

$$a - r m \leq 1 \quad m \geq r$$

$$D_f = [r, a]$$

$$a - r m \geq 0 \Rightarrow m \leq \frac{a}{r}$$

$$\Rightarrow m > 0$$

$$y = \log_p (1 - \log \frac{m}{r})$$

$$D_f = (a, r)$$

$$\Rightarrow 1 - \log \frac{m}{r} > 0$$

$$\Rightarrow m < r$$

$$y = \log_p (1 - \log \frac{m}{r})$$

$$D_f = (0, \frac{1}{r})$$

$$\Rightarrow m > 0$$

$$1 - \log \frac{m}{r} > 0$$

$$\log \frac{m}{r} < 1$$

$$y = \sqrt{p^{r m - m^p} - 1}$$

$$D_f = [r, p]$$

$$\Rightarrow p^{r m - m^p} \geq p^{r m}$$

$$\Rightarrow r m - m^p \geq r m$$

$$\Rightarrow -m^p \geq 0$$

$$\Rightarrow m^p \leq 0$$

$$y = \left(\frac{p m + a}{p m + r} \right)!$$

$$\frac{p m + a}{p m + r} \in W$$

$$p m + a = p m + r$$

$$p m + a = p m + r$$

$$D_f = \{m \mid m = \frac{r k - a}{p - r} \in W\}$$

$$m(p - r) = r m - a$$

$$m = \frac{r m - a}{p - r}$$

$$\begin{array}{r|l}
 n^N n^N + q n^N + l o n^N + w & n+1 \\
 \hline
 -n^N & n^N + V n + w
 \end{array}$$

$$\begin{array}{r}
 V n^N + l o n + w \\
 - V n^N - V n \\
 \hline
 n^N + w
 \end{array}$$

$$\begin{aligned}
 & n^N + V n + w \\
 & (n+1)(n+1) \\
 & n = -w \\
 & n = -\frac{1}{V}
 \end{aligned}$$

وز بزرگداشت پروین اعتصامی

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پنجشنبه

۲۳ اسفند

۱۲ رمضان ۱۴۴۶

13 March 2025

$$\begin{array}{r}
 n^N - Nn^N + Nn - 1 \\
 - n^N + n^N \\
 \hline
 - n^N + Nn - 1 \\
 + n^N - n \\
 \hline
 n - 1
 \end{array}
 \quad \bigg| \quad \frac{n-1}{n^N - n + 1} \rightarrow \Delta < 0$$

استدلال