

$$\frac{2n^2 + 2n^2 - 1n + 3(n-1) - 1}{2n^2 - 2n^2} = \frac{5n^2 - 1n}{5n^2 - 5n}$$

$$\textcircled{2} \rightarrow 2n^2 + 5n - 1 \Rightarrow n^2 + 5n - 4 \Rightarrow (n+4)(n-1)$$

$$n \neq -4, \frac{1}{4}$$

$$\textcircled{1} \rightarrow \frac{1}{4} \quad D, R = \{-4, \frac{1}{4}\}$$

$$\frac{2n^2 + 9n^2 + 10n + 3}{2n^2 + 2n^2} = \frac{11n^2 + 10n + 3}{2n^2 + 2n^2}$$

$$\frac{11n^2 + 10n + 3}{2n^2 + 2n^2} = \frac{11n^2 + 10n + 3}{2n^2 + 2n^2}$$

$$n \neq -\frac{4}{5}, -1$$

$$\textcircled{2} \rightarrow \frac{1}{5} \quad D, R = \{-\frac{4}{5}, -1\}$$

$$\frac{n^2 - 2n^2 + 2n - 1}{n^2 - n^2} = \frac{n^2 - n + 1}{n^2 - n + 1}$$

$$\frac{n^2 - n + 1}{n^2 - n + 1} = \frac{n^2 - n + 1}{n^2 - n + 1}$$

$$n \neq 1$$

$$\textcircled{1} \rightarrow \frac{1}{1} \quad D, R = \{1\}$$

$$\textcircled{2} \rightarrow \frac{1}{4} - \frac{1}{5} + \frac{1}{6} = \frac{1}{120}$$

$$\frac{1}{120} = \frac{1}{120}$$

$$D = (-\infty, -\frac{1}{120}) \cup (-\frac{1}{120}, \infty)$$

$$n^r - rn + 0$$

$$(n-1)^r = 0 \mid n-1 + \varepsilon \quad -r$$

$$(n-1)^r = n^r + 1 - rn$$

$$\mid n-1 \mid \leq t$$

$$t^r = 0t + \varepsilon \Rightarrow (t-\varepsilon)(t-1)$$

$$t \in \mathbb{R}$$

$$\mid n-1 \mid \leq \varepsilon \quad n-1 \leq \varepsilon \mid n-1 \leq -\varepsilon$$

$$n \leq 0 \quad \mid \quad n \leq -\varepsilon$$

$$\mid n-1 \mid \leq 1 \quad n-1 \leq 1 \quad n \leq 2$$

$$\mid n-1 \mid \leq -1 \quad n \leq -1$$

$$D \subseteq \mathbb{R} = \{0, 1, \cancel{2}, -r\} \quad \textcircled{2}$$

$$f(n) = \begin{cases} -n & n \leq -r \\ n & n \geq -r \end{cases} \quad \textcircled{2}$$

$$\rightarrow \frac{0n^5 + 4}{5}$$

$$[n]^r - r[n] - r \rightarrow ([n] - r)([n] + 1)$$

$$[n] \leq r$$

$$[n] \leq -1$$

$$r \leq n \leq r+1 \quad \mid \quad -1 \leq n \leq 0$$

$$D \subseteq \mathbb{R} = ([r, \varepsilon) \cup [1, 0) \rightarrow (-\infty, -1) \cup [0, r) \cup [\varepsilon, +\infty)$$

$$\left\lceil n + \frac{r}{r} - 1 \right\rceil + \left\lceil n + \frac{r}{r} \right\rceil$$

$$\left\lceil n + \frac{r}{r} \right\rceil + \left\lceil n + \frac{r}{r} \right\rceil - 1$$

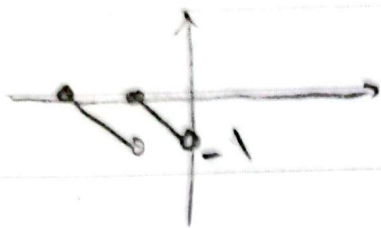
$$0 \leq r \left\lceil n + \frac{r}{r} \right\rceil - 1 \quad \frac{1}{r} \leq \left\lceil n + \frac{r}{r} \right\rceil \quad 1 \leq n + \frac{r}{r}$$

Scanned with

$$\frac{1}{r} \leq \pi$$

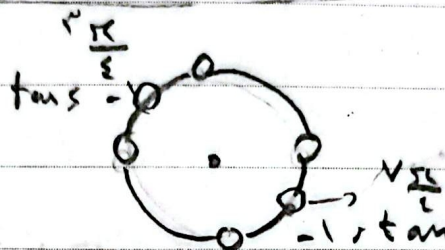
$$\rightarrow \{ \bullet \} + \{ - \bullet \}$$

$$n = \frac{1}{r} = k \quad n \in k + \frac{1}{r} \quad k \in \mathbb{Z}$$



$$P_1 \left(n \mid n \in k + \frac{1}{r}, k \in \mathbb{Z} \right)$$

تقریب نزد $\cos n$
 $\tan n$ تقریب $\neq 1$

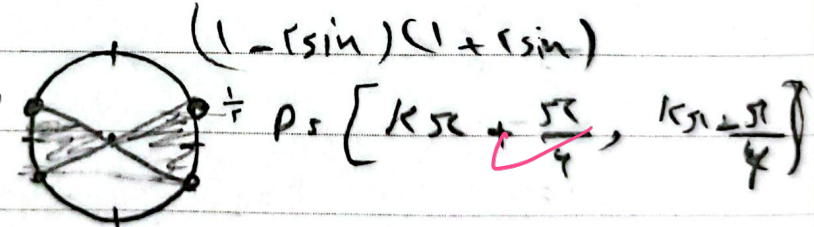


$$R = \left\{ \frac{k\pi}{r}, k\pi - \frac{\pi}{r} \right\}$$

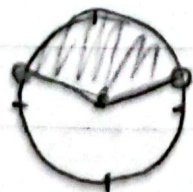
$$\sin^2 n \leq \frac{1}{r}$$

$$\sin^2 \left(\frac{1}{r} \right)$$

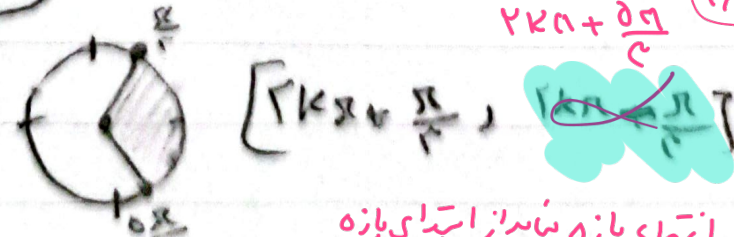
$$\frac{1}{r} \leq \sin n \leq \frac{1}{r}$$



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



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



انتهای بازه نباید از ابتدای بازه
 گذشته تر باشد!

الف)

$$I: x^2 + 2x + 1 < 0$$

$$II: x(x+2) < 0$$

$$x^2 + 2x + 1 < 0$$

$$(x+1)^2 < 0$$

$$x^2 + 2x + 1 = 0$$

$$x^2 + 2x + 1 = 0$$

$$II: x(x+2) < 0$$

$$x^2 + 2x + 1 = 0$$

$$(x+1)^2 < 0$$

$$\rightarrow D: [-3, -2] \cup [-1, 0]$$

1, 4

بعضی منهای آخر

$$I \cap II \rightarrow D: [-2, -1]$$

$$I: \sqrt{5-2x} < 1$$

$$\sqrt{5-2x} < 1$$

$$5-2x < 1$$

$$2x < 4$$

$$II: -2x < -2$$

$$I \cap II \rightarrow 2 < x < 4$$

$$I: \log_n^n > 1 - \log_n^n$$

$$II: \log_n^n < 1$$

$$I \cap II \rightarrow 0 < n < 1$$

$$\frac{r_{n+0}}{r_{n+2}} \in W$$

$$\frac{r_{n+0}}{r_{n+2}} \leq k - \left(\frac{\varepsilon k - 0}{r_{k-1}} \right) \leq n \quad 0 - \frac{\varepsilon k}{r_{k-1}} \leq n$$

$$\left\{ n \mid n \leq \frac{0 - \varepsilon k}{r_{k-1}}, k \in W, n \neq -1 \right\} \quad \text{D}$$

v-ب) $1 - r \cdot \sin \geq 0 \rightarrow \sin \leq \frac{1}{r}$  $\rightarrow D\phi = [r \cos \theta + \frac{1}{r}, r \cos \theta + \frac{1}{r}]$

الف) $-1 \leq x^r + y_n + 1 \leq 1 \rightarrow -1 \leq x^r + y_n + \frac{1}{\varepsilon} - \frac{1}{\varepsilon} \leq 1$

$$\frac{1}{\varepsilon} \leq x^r + y_n + \frac{1}{\varepsilon} \leq \frac{1}{\varepsilon} \rightarrow \frac{1}{\varepsilon} \leq (x + \frac{y}{r})^r \leq \frac{1}{\varepsilon}$$

$$\int (x + \frac{y}{r})^r \leq \frac{1}{\varepsilon} \rightarrow -\frac{r}{r} \leq x + \frac{y}{r} \leq \frac{r}{r} \rightarrow -1 \leq x \leq 1$$

$$\int (x + \frac{y}{r})^r \geq \frac{1}{\varepsilon} \rightarrow x + \frac{y}{r} \geq \frac{1}{r} \rightarrow x \geq -1 \leq x + \frac{y}{r} \leq -\frac{1}{r} \rightarrow x \leq -1$$

$$I \cap II \rightarrow D\phi = [-1, -1] \cup [-1, 0]$$