

1) $R = \{ \text{اینجمله} \} \Rightarrow y. \frac{n+3}{2n^3 + 3n^2 - 4n + 3} = \frac{(n+3)}{(n-1)(4n^2 + 5n + 3)}$

می بینیم که این سه عبارت (ن-1) (ن-1) (ن-1) می باشد

① $\left(-\frac{1}{4}\right) \left(-\frac{3}{2}\right)$

$R = \left\{ 1, -\frac{1}{4}, -\frac{3}{2} \right\}$

2) $\frac{n+3}{2n^3 + 9n^2 + 10n + 3} = \frac{n+3}{(n+1)(2n^2 + 7n + 3)}$

① $\left(-\frac{1}{2}\right) \left(-\frac{3}{1}\right)$

$R = \left\{ -1, -3, -\frac{1}{2} \right\}$

می بینیم که این سه عبارت (ن+1) (ن+1) (ن+1) می باشد

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

① $R = \{ 1 \}$

3) $\sqrt{\frac{n+3}{n^3 - 2n^2 + 2n - 1}} \geq 0$

① $\frac{-3}{4 - 4 + 1} = 1$

$(-\infty, -3] \cup (1, +\infty)$

4) $\frac{2}{n^3 - 4n^2 + 4n - 1} = \frac{2}{(n-1)(n^2 - 3n + 1)}$

① $R = \{ 2, 0 \}$

② $\left(\frac{n-1}{n-1}\right) \left(\frac{n-1}{n-1}\right) = 0$

③ $\left(\frac{n-1}{n-1}\right) \left(\frac{n-1}{n-1}\right) = 0$

5) $y = \sqrt{[-n] - 2} \Rightarrow [-n] - 2 \geq 0 \Rightarrow [-n] \geq 2 \Rightarrow (-\infty, -4]$

6) $y = \frac{2n^2 + 4}{[n]^2 - 2[n] - 3} = \frac{(2n+4)}{([n]-3)([n]+1)}$

① $(3, 4)$ ② $(-1, 0)$

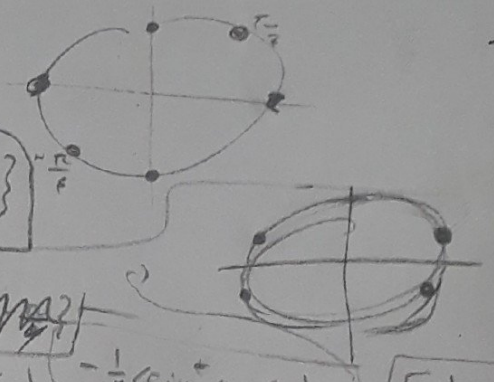
$R = \{ (3, 4) \cup (-1, 0) \}$

7) $\sqrt{[n - \frac{1}{2}] + [n + \frac{2}{3}]} \Rightarrow [n] - \frac{1}{2} + [n] + \frac{2}{3} \geq 0 \Rightarrow 2[n] + \frac{1}{6} \geq 0 \Rightarrow [n] \geq -\frac{1}{12} \Rightarrow [2, +\infty)$

8) $\sqrt{[n - \frac{1}{2}] + [\frac{1}{2} - n]} \Rightarrow [n] - \frac{1}{2} + \frac{1}{2} - [n] \geq 0 \Rightarrow [n] + [-n] \geq 0 \Rightarrow \emptyset$

$y. \frac{\cot t + 1}{\tan t + 1} = \frac{\frac{\cos t}{\sin t} + 1}{\frac{\sin t}{\cos t} + 1}$

$A = \left\{ K\frac{\pi}{r}, K\pi + \frac{\pi}{r} \right\}$



$y. \sqrt{1 - r \sin^2 n}$
 $1 - r \sin^2 n \geq 0 \Rightarrow r \sin^2 n \leq 1 \Rightarrow \sin^2 n \leq \frac{1}{r} \Rightarrow \sin n \in \left[-\frac{1}{\sqrt{r}}, \frac{1}{\sqrt{r}} \right]$

ان $\sqrt{r \sin^2 n - 1}$ $r \sin^2 n - 1 \geq 0 \Rightarrow r \sin^2 n \geq 1 \Rightarrow \sin^2 n \geq \frac{1}{r} \Rightarrow \sin n \in \left[\frac{1}{\sqrt{r}}, 1 \right] \cup \left[-1, -\frac{1}{\sqrt{r}} \right]$

$y. \sqrt{1 - r \cos^2 n}$
 $1 - r \cos^2 n \geq 0 \Rightarrow r \cos^2 n \leq 1 \Rightarrow \cos^2 n \leq \frac{1}{r} \Rightarrow \cos n \in \left[-\frac{1}{\sqrt{r}}, \frac{1}{\sqrt{r}} \right]$

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$y. \sqrt{r - r^2}$
 $r - r^2 \geq 0 \Rightarrow r(1 - r) \geq 0 \Rightarrow 0 \leq r \leq 1$

$y. \sqrt{r - r^2}$
 $r - r^2 \leq 1 \Rightarrow 1 \leq r - r^2 \leq 1 \Rightarrow -r \leq -r^2 \leq -r \Rightarrow r \leq r^2 \leq r \Rightarrow r \leq r$

$y. \log_r (1 - \log_r^n)$ $n > 0$ $(1, +\infty)$

$y. \log_r (1 - \log_r^n)$ $n > 0$ $\left(\frac{1}{r}, +\infty \right)$
 $1 - \log_r^n > 0 \Rightarrow \log_r^n < 1 \Rightarrow \log_r n < \frac{1}{r}$

$y. \sqrt{r^m - r^n}$
 $r^m - r^n \geq 0 \Rightarrow r^m \geq r^n \Rightarrow m \geq n$

$y. \left| \frac{r^m + r^n}{r^m + r^n} \right|$ $\frac{r^m + r^n}{r^m + r^n} \in W \Rightarrow n \in \frac{r^m + r^n}{r^m + r^n} \cdot \{n \mid m \in \frac{r^k + r^n}{r^m + r^n}, k \in W\}$