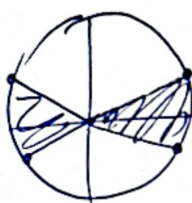
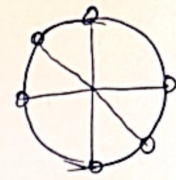


۲. آخرین معادله در تب بنویسید $y = \frac{n+1}{n^2+9n+10n+10}$ $\Rightarrow \frac{n+1}{(n+1)(n^2+4n+4)} = \frac{(n+1)}{(n+1)(n+1)(n+1)}$ $\text{Rf: IR} = \left\{ -1, -\frac{1}{2}, -1, -1 \right\}$	۱. اولی معادله در تب بنویسید $y = \frac{n+1}{n^2+4n+4} = \frac{n+1}{(n+1)(n+1)(n+1)}$ $\text{Rf: IR} = \left\{ -1, -\frac{1}{2}, -1, -1 \right\}$
$y = \sqrt{\frac{(n+1)^2-1}{(n-1)(n^2-n+1)}} = \frac{-1}{+1-0+}$ $\text{Rf: } (-\infty, -1] \cup (1, +\infty)$	$y = \frac{n+1}{n^2-2n+1} = \frac{n+1}{(n-1)(n^2+1-n)}$ $\text{Rf: IR} = \{1\}$
$y = \frac{1}{n^2-2n+1-2n+1}$ if $n \geq 1$ $n^2-2n+1-2n+1 \Rightarrow n^2-4n+2 \Rightarrow (n-1)(n-2)$ if $n \leq 0$ $n^2+2n-1-2n+1 \Rightarrow n^2-1 \Rightarrow (n-1)(n+1)$ $\text{Rf: IR} = \left\{ -\frac{1}{2}, 0, 1 \right\}$	۳. اگر $n \geq 0$ $[n] \geq 1$ ۴. اگر $n \leq -1$ $[n] \leq -1$ $\text{Rf: IR} = [-1, 0] \cup [1, \infty)$
$y = \sqrt{\left[n-\frac{1}{2}\right] + \left[\frac{1}{2}-n\right]} \Rightarrow [a] + [-a] \geq 0$ if $a \in \mathbb{Z} \Rightarrow a - \frac{1}{2} \in \mathbb{Z} \Rightarrow a \in \mathbb{Z} + \frac{1}{2}$ if $a \in \mathbb{Z} \Rightarrow -1$ $\text{Rf: } [a a = k + \frac{1}{2}, k \in \mathbb{Z}]$	$y = \sqrt{\left[n-\frac{1}{2}\right] + \left[n+\frac{1}{2}\right]} \Rightarrow [a] + \left[n+\frac{1}{2}\right] \geq 0$ if $a \in \mathbb{Z} \Rightarrow [a] \geq \frac{1}{2} \Rightarrow a \geq \frac{1}{2} \Rightarrow [a] = 1$ if $a \in \mathbb{Z} \Rightarrow -1$ $\text{Rf: } [a a = k + \frac{1}{2}, k \in \mathbb{Z}]$

$y: \sqrt{1-\varepsilon \sin \theta} \Leftrightarrow 1-\varepsilon \sin \theta \geq 0$
 $\sin \theta \leq \frac{1}{\varepsilon} \Leftrightarrow -\frac{1}{\varepsilon} \leq \sin \theta \leq \frac{1}{\varepsilon}$

 $\rho: [100 - \frac{a}{4}, 100 + \frac{a}{4}]$

$y: \frac{\cos \theta + 1}{\tan \theta + 1}$ (ci)
 $\sin \theta \neq 0 \Leftrightarrow \theta \neq \pi, 0$
 $\cos \theta \neq 0 \Leftrightarrow \theta \neq \frac{\pi}{2}, \frac{3\pi}{2}$
 $\tan \theta \neq 1 \Leftrightarrow \theta \neq \frac{\pi}{4}, \frac{5\pi}{4}$
 $\rho: [100 - \frac{100}{\varepsilon}, 100 + \frac{100}{\varepsilon}]$


$y: \sqrt{1-\varepsilon \cos \theta}$
 $\cos \theta \leq \frac{1}{\varepsilon}$

 $\rho: [100 + \frac{a}{\varepsilon}, 100 + \frac{\delta a}{\varepsilon}]$

$y: \sqrt{\varepsilon \sin \theta - 1}$ (ci)
 $\varepsilon \sin \theta \geq 1 \Leftrightarrow \sin \theta \geq \frac{1}{\varepsilon}$

 $\rho: [100 + \frac{a}{4}, 100 + \frac{\delta a}{4}]$

$y: \sqrt{\delta - \varepsilon \cos \theta}$ (ci)
 $\delta - \varepsilon \cos \theta \geq 0 \Leftrightarrow \cos \theta \leq \frac{\delta}{\varepsilon}$
 $\delta - \varepsilon \cos \theta \geq 0 \Leftrightarrow \cos \theta \leq \frac{\delta}{\varepsilon}$
 $\rho: [100 + \frac{a}{\varepsilon}, 100 + \frac{\delta a}{\varepsilon}]$

$y: \arcsin(\cos \theta + 1)$ (ci)
 $-1 \leq \cos \theta + 1 \leq 1$
 $\cos \theta \leq 0 \Leftrightarrow \theta \in [\frac{\pi}{2}, \frac{3\pi}{2}]$
 $\rho: [100 + \frac{a}{\varepsilon}, 100 + \frac{\delta a}{\varepsilon}]$

$y: \log_r(1 + \log \frac{1}{\varepsilon})$ (ci)
 $\log \frac{1}{\varepsilon} \leq 1 \Leftrightarrow \frac{1}{\varepsilon} \leq e$
 $\rho: [100 + \frac{a}{\varepsilon}, 100 + \frac{\delta a}{\varepsilon}]$

$y: \log_r(1 + \log \frac{1}{\varepsilon})$ (ci)
 $\log \frac{1}{\varepsilon} \leq 1 \Leftrightarrow \frac{1}{\varepsilon} \leq e$
 $\rho: [100 + \frac{a}{\varepsilon}, 100 + \frac{\delta a}{\varepsilon}]$

$\frac{\varepsilon \cos \theta}{\varepsilon - \cos \theta} \in \mathbb{N}$
 $\varepsilon \cos \theta \in \mathbb{N}$
 $\rho: [100 + \frac{a}{\varepsilon}, 100 + \frac{\delta a}{\varepsilon}]$

$y: \frac{\varepsilon \cos \theta}{\varepsilon - \cos \theta}$ (ci)
 $\varepsilon \cos \theta \in \mathbb{N}$
 $\rho: [100 + \frac{a}{\varepsilon}, 100 + \frac{\delta a}{\varepsilon}]$