

آزین بودعلری ۱۹، ۲۵ آفرین!

۱- ۲

مندی نداد

الف) $y = \frac{\sin x - 1}{r \cos x + 1} \rightarrow r \cos x + 1 \neq 0 \rightarrow r \cos x \neq -1 \rightarrow \cos x \neq -\frac{1}{r} \rightarrow \begin{cases} 120^\circ \\ 240^\circ \end{cases}$

$D_\phi = \mathbb{R} - \left\{ r k \pi + \frac{r \pi}{r} \right\}$ و $\left\{ r k \pi - \frac{r \pi}{r} \right\}$ ✓



ب) $y = \frac{\sin x + 1}{\cos x - 1}$

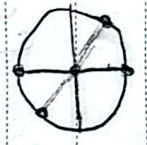
$\cos x - 1 \neq 0 \rightarrow \cos x \neq 1 \rightarrow \begin{cases} 0^\circ \\ 360^\circ \end{cases}$



$D_\phi = \mathbb{R} - \{ r k \pi \}$ ✓

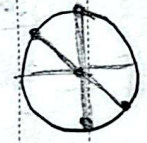
۲- ۲

الف) $\frac{r \sin x + 1}{\tan x + 1} \rightarrow \tan x + 1 \neq 0 \rightarrow \tan x \neq -1 \rightarrow \begin{cases} 135^\circ \\ 225^\circ \end{cases}$
 $\rightarrow \tan \neq 0 \rightarrow \begin{cases} 0^\circ \\ 180^\circ \end{cases}$



$D_\phi = \mathbb{R} - \left\{ k \pi + \frac{\pi}{4} \right\}$ و $\left\{ k \pi + \frac{\pi}{4} \right\}$ ✓

ب) $\frac{\cos x + 1}{\cot x - 1} \rightarrow \cot x - 1 \neq 0 \rightarrow \cot x \neq 1 \rightarrow \begin{cases} 45^\circ \\ 225^\circ \end{cases}$
 $\rightarrow \cot x \neq 0 \rightarrow \begin{cases} 90^\circ \\ 270^\circ \end{cases}$



$D_\phi = \mathbb{R} - \left\{ k \pi + \frac{\pi}{4} \right\}$ ✓

۳- ۲

الف) $\sin y = \frac{1}{r} \rightarrow \begin{cases} 30^\circ \\ 150^\circ \\ 210^\circ \\ 330^\circ \end{cases}$ و $\begin{cases} 90^\circ \\ 270^\circ \end{cases}$ ✓

ب) $\arccos(\sqrt{3} - 1) \rightarrow \begin{cases} 30^\circ \\ 150^\circ \end{cases}$ و $\begin{cases} 210^\circ \\ 330^\circ \end{cases}$ ✓

$D_\phi = [4, 14]$ ✓

الف) $y = \sqrt{r \log r} \xrightarrow{(n-r)} \sqrt{r \log r} > 0 \rightarrow \log r \xrightarrow{n-r} n-r \xrightarrow{n-r} n-r$

$(r) \xrightarrow{n-r} n-r > 0 \rightarrow n-r$

$(1) \cup (2) \xrightarrow{r} \sqrt{r}$

ب) $\log(r \log r - 1) \xrightarrow{r \log r - 1} 0 \rightarrow r \log r > 1 \rightarrow \log r > \frac{1}{r}$

$n > \sqrt{r} \rightarrow n \cup (2) \xrightarrow{r} \sqrt{r} + \infty$

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الف) $y = \frac{r}{\varepsilon n + 1} \xrightarrow{\varepsilon + 1 \neq 0} \varepsilon \neq 1 \rightarrow D \neq \mathbb{R}$

ب) $y = \frac{r}{\varepsilon n - 1} \xrightarrow{\varepsilon - 1 \neq 0} \varepsilon \neq 1 \rightarrow n \neq 0 \rightarrow D \neq \mathbb{R}$

ج) $y = \frac{r}{\varepsilon n - r} \xrightarrow{\varepsilon - r \neq 0} \varepsilon \neq r \rightarrow n \neq \frac{r}{\varepsilon} \rightarrow D \neq \mathbb{R}$

د) $y = \frac{r}{\varepsilon n - r} \xrightarrow{\varepsilon - r \neq 0} \varepsilon \neq r \rightarrow n \neq \log r \rightarrow D \neq \mathbb{R}$

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الف) $y = (\varepsilon n + 1) i \xrightarrow{\varepsilon n + 1 \in \mathbb{N}} D \neq \{n | n = \frac{K-1}{\varepsilon}, K \in \mathbb{N}\}$

ب) $y = \left(\frac{r n - r}{r n - \varepsilon} \right) i \xrightarrow{\frac{r n - r}{r n - \varepsilon} \in \mathbb{W}} D \neq \left\{ n | n = -\frac{\varepsilon K + r}{r K - r}, K \in \mathbb{W} \right\}$