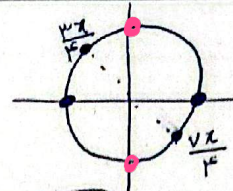




الف  $\rightarrow$   $\tan u \neq -1$   
 $\cot u = \frac{\cos u}{\sin u} \Rightarrow \sin u \neq 0$   
 $\tan u = \frac{\sin u}{\cos u} \rightarrow \cos u \neq 0 \rightarrow u \neq k\pi + \frac{\pi}{2}$

$D_f = R - \left\{ k\pi, k\pi - \frac{\pi}{2} \right\}$



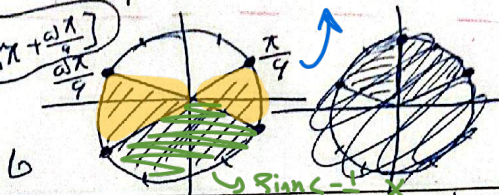
لاصل صفحتي بعد

بازمقابل قبول

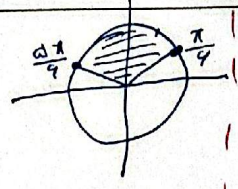
1.5

الف  $\rightarrow$   $1 - \sqrt{2} \sin u \geq 0$   
 $1 \geq \sqrt{2} \sin u$   
 $\frac{1}{\sqrt{2}} \geq \sin u$

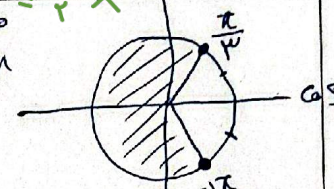
$D_f = R - \left[ \sqrt{2}\pi + \frac{\pi}{4}, \sqrt{2}\pi + \frac{3\pi}{4} \right]$



الف  $\rightarrow$   $\sqrt{2} \sin u - 1 \geq 0$   
 $\sqrt{2} \sin u \geq 1$   
 $\sin u \geq \frac{1}{\sqrt{2}}$



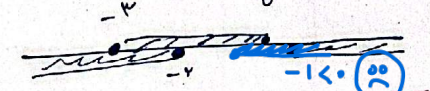
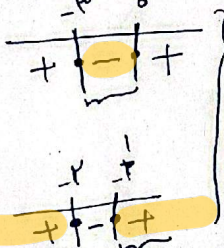
الف  $\rightarrow$   $1 - \sqrt{2} \cos u \geq 0$   
 $1 \geq \sqrt{2} \cos u$   
 $\cos u \leq \frac{1}{\sqrt{2}}$



$D_f = \left[ \sqrt{2}\pi + \frac{\pi}{4}, \sqrt{2}\pi + \frac{3\pi}{4} \right]$

$D_f = R - \left[ \sqrt{2}\pi - \frac{\pi}{4}, \sqrt{2}\pi + \frac{\pi}{4} \right]$

الف  $\rightarrow$   $-1 < n^2 + m + 1 \leq 1$   
 $n^2 + m + 1 \leq 1 \rightarrow n^2 + m \leq 0$   
 $n^2 + m + 1 > -1 \rightarrow n^2 + m + 2 > 0$



$D_f = [-3, -2]$

$D_f = (-\infty, -2]$

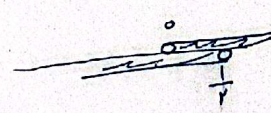
الف  $\rightarrow$   $\log \frac{1}{\sqrt{2}} < 1$   
 $\log \frac{1}{\sqrt{2}} < 1 \rightarrow \frac{1}{\sqrt{2}} < 10$   
 $\log \frac{1}{\sqrt{2}} \rightarrow n > 0$

الف  $\rightarrow$   $1 - \log \frac{1}{\sqrt{2}} > 0$   
 $\log \frac{1}{\sqrt{2}} < 1 \rightarrow \frac{1}{\sqrt{2}} < 10$   
 $\log \frac{1}{\sqrt{2}} \rightarrow n > 0$

$D_f = (0, \sqrt{2})$

الف  $\rightarrow$   $1 - \log \frac{1}{\sqrt{2}} > 0$

$\log \frac{1}{\sqrt{2}} < 1$   
 $\frac{1}{\sqrt{2}} < 10$   
 $\log \frac{1}{\sqrt{2}} \rightarrow n > 0$



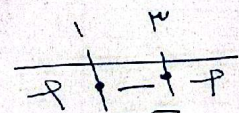
$D_f = (0, \frac{1}{\sqrt{2}})$

مباين ه والست بين هت ناساده عوض مرئور

$\frac{m + \omega}{m + \varepsilon} \in \omega$

$m + \omega = \varepsilon m + \omega$   
 $m - \varepsilon m = \omega - \omega$   
 $m(1 - \varepsilon) = 0$   
 $m = \frac{\omega - \omega}{1 - \varepsilon}$

$m(F - n) - 1 \geq 0$   
 $m(\varepsilon - n) \geq 1$



$D_f = [1, 3]$

$m(\varepsilon - n) \geq 1$   
 $\varepsilon m - n^2 \geq 1 \rightarrow n^2 - \varepsilon m + 1 \leq 0 \rightarrow (n - 1)(n - 3) \leq 0$

$D_f = \left\{ x \mid x = \frac{Fk - \omega}{F - \varepsilon k}, k \in \omega \right\}$

$$\text{الف - ۴)} \quad [-n] - 2 \geq 0 \rightarrow [-n] \geq 2 \rightarrow -n \geq 2 \rightarrow n \leq -2 \rightarrow D_f = (-\infty, -2]$$

$$\text{ب - ۵)} \quad \left[n - \frac{1}{x}\right] + \left[-n + \frac{1}{x}\right] \geq 0$$

مردانیم:

$$\begin{aligned} [n] + [-n] & \begin{cases} n \in \mathbb{Z} & 0 \checkmark \\ n \notin \mathbb{Z} & -1 \times \end{cases} \end{aligned}$$

$$\rightarrow \left[n - \frac{1}{x}\right] \in \mathbb{Z} \rightarrow n \in \mathbb{Z} + \frac{1}{x}$$

$$D_f = \left\{ x \mid x = k + \frac{1}{x}, k \in \mathbb{Z} \right\}$$

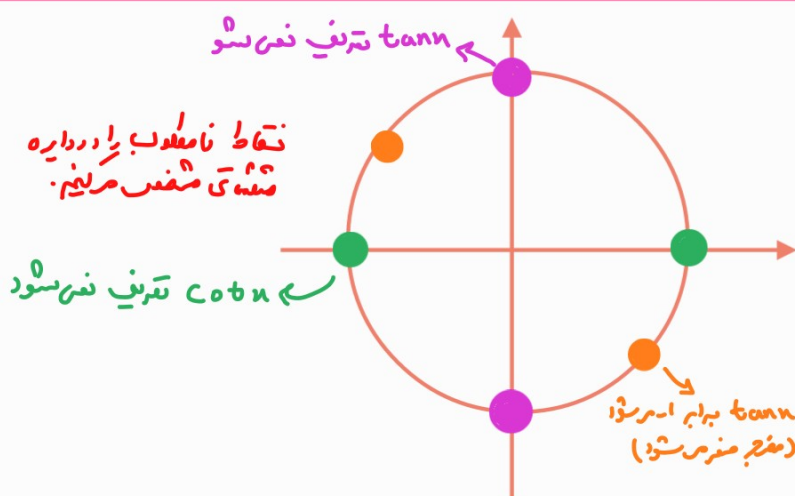
$$\text{الف - ۹)} \quad y = \frac{\cot x + 1}{\tan x + 1}$$

$$x \neq k\pi + \frac{\pi}{2}$$

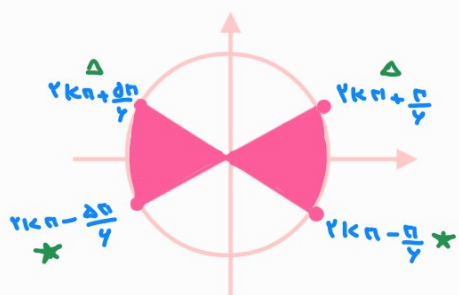
$$x \neq k\pi + \frac{\pi}{4} \cup x \neq k\pi$$

$$\rightarrow x \neq \frac{k\pi}{4}$$

$$\rightarrow D_f = \mathbb{R} - \left\{ \frac{k\pi}{4}, k\pi + \frac{\pi}{2} \right\}$$



$$\text{ب - ۹)} \quad 1 - 4 \sin^2 x \geq 0 \rightarrow 4 \sin^2 x \leq 1 \rightarrow \sin^2 x \leq \frac{1}{4} \rightarrow -\frac{1}{2} \leq \sin x \leq \frac{1}{2}$$



$$\rightarrow D_f = \left[ k\pi - \frac{\pi}{6}, k\pi + \frac{\pi}{6} \right]$$

$$8 - \text{الف} - ) -1 \leq x^r + w_n + 1 \leq 1 \xrightarrow{\frac{q}{r} - \frac{q}{r}} -1 \leq x^r + w_n + \frac{q}{r} - \frac{q}{r} \leq 1$$

$$\frac{1}{2} \leq x^r + w_n + \frac{q}{r} \leq \frac{q}{r} \rightarrow \frac{1}{2} \leq (n + \frac{w}{r})^r \leq \frac{q}{r}$$

$$\int (n + \frac{w}{r})^r \leq \frac{q}{r} \rightarrow -\frac{r}{r} \leq n + \frac{w}{r} \leq \frac{r}{r} \rightarrow -r \leq n \leq 0 \quad I$$

$$\int (n + \frac{r}{r})^r \geq \frac{1}{2} \rightarrow n + \frac{r}{r} \geq \frac{1}{r} \rightarrow n \geq -1 \quad \text{و} \quad n + \frac{r}{r} \leq -\frac{1}{r} \rightarrow n \leq -r \quad II$$

$$I \cap II \rightarrow D_f = [-r, -r] \cup [-1, 0]$$

$$9 - \text{ب} - ) y = \log_r (1 - \log^{\frac{n}{r}} \frac{1}{r}) \rightarrow \log^{\frac{n}{r}} \frac{1}{r} \rightarrow n > 0$$

$$\hookrightarrow 1 - \log^{\frac{n}{r}} \frac{1}{r} > 0 \rightarrow \log^{\frac{n}{r}} \frac{1}{r} < 1 \xrightarrow{\text{منابع (و 1)}} n > \frac{1}{r}$$

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