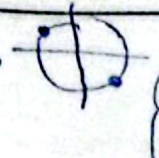
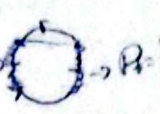


الف) $\tan x \neq 0 \rightarrow \tan x \neq 1 \rightarrow$  $\left\{ D_f = \mathbb{R} - \left\{ \frac{\pi}{4}, \pi, \pi - \frac{\pi}{4} \right\} \right\}$
 $\tan x \neq 0 \rightarrow$ 

ب) $1 - \cos x > 0 \rightarrow \frac{1}{2} < \sin^2 x \rightarrow \frac{1}{\sqrt{2}} < \sin x < \frac{1}{\sqrt{2}} \rightarrow$  $D_f = \left[\pi - \frac{\pi}{4}, \pi, \pi + \frac{\pi}{4} \right]$

الف) $1 - \cos x > 0 \rightarrow \frac{1}{2} < \sin^2 x \rightarrow$  $D_f = \left[\pi - \frac{\pi}{4}, \pi, \pi + \frac{\pi}{4} \right]$

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الف) $1 \leq \sqrt{x^2 + 2x + 2} \leq 1 \rightarrow x^2 + 2x \leq 0 \rightarrow x(x+2) \leq 0$
 $\left(-\infty, -2 \right] \cup \left[0, +\infty \right)$
 $0 \leq x^2 + 2x + 2$
 $\frac{-2 \pm \sqrt{4 - 8}}{2} = \frac{-2 \pm 2i}{2} = -1 \pm i$
 $\rightarrow [-2, 0] \cup [0, +\infty)$

ب) $1 \leq \sqrt{\omega - 2\omega} \leq 1 \rightarrow 0 \leq \omega - 2\omega \leq 1 \rightarrow \cos 2\omega - 1 \rightarrow \frac{-1 \pm 1}{2} = 0$
 $\frac{0 \pm \sqrt{0 - 4}}{2} = \frac{0 \pm 2i}{2} = \pm i$
 $\rightarrow [-1, 0] \cup [0, +\infty)$

الف) $1 - \log_p x > 0 \rightarrow x > \log_p 1 \rightarrow \boxed{x > 0} \quad \boxed{x > 0}$
 $(0, \infty)$

ب) $1 - \log_p x > 0 \rightarrow x > \log_p 1 \rightarrow \boxed{x > 0}, (0, \infty)$

الف) $\neq r^{(n-n)} > 1 \rightarrow r^{n-n} > 1 \rightarrow r^n - r^n = 0 \rightarrow r^n - r^n = 0 \rightarrow r^n - r^n = 0$
 $\frac{1}{1 - r^n} \rightarrow \frac{1}{1 - r^n} \rightarrow \frac{1}{1 - r^n} \rightarrow \frac{1}{1 - r^n}$

$\frac{r^n + 0}{r^n - 1} \in \mathbb{W} \rightarrow r^n + 0 = r^n - 1 + 1 \rightarrow r^n - r^n = 0 \rightarrow r^n - r^n = 0$
 $r = \frac{r^n - 1}{r^n - 1} \rightarrow \frac{r^n - 1}{r^n - 1} \rightarrow \frac{r^n - 1}{r^n - 1}$

الف) $r^n + r^n + r^n + r^n \rightarrow (r^n + r^n) \times (r^n + r^n)$
 $D_f = \mathbb{R} - \left\{ \frac{\pi}{4}, \frac{3\pi}{4} \right\}$

ب) $r^n + r^n + r^n + r^n \rightarrow (r^n + r^n) \times (r^n + r^n)$
 $D_f = \mathbb{R} - \left\{ \frac{\pi}{4}, \frac{3\pi}{4} \right\}$