

① $[a=p] \Rightarrow \sqrt{p^2 x^2 + b} \Rightarrow \sqrt{p^2 x^2 + b}$
 $\Rightarrow p x + b \geq 0 \xrightarrow{x=p} [b \geq -p]$

② $f(x) = \sqrt{x^p + p x + p - m^p} \Rightarrow \Delta \leq 0 \Rightarrow f \leq f(p - m^p) \leq 0$
 $1 - p + m^p \leq 0 \Rightarrow m^p \leq 1 \Rightarrow [-1 \leq m \leq 1]$

مجموعه S برابر p

③ $[x] + [-x] \Rightarrow$ اگر $x \in \mathbb{Z} \Rightarrow = 0$
 اگر $x \notin \mathbb{Z} \Rightarrow -1 \Rightarrow$ $D_f = [-p, -1] \cup [p, 0]$

④ الف) $\sqrt{x^p(x+1)^p} \Rightarrow x^p(x+1)^p \geq 0 \Rightarrow x \geq -1$
 ب) $\sqrt{\frac{x^p(x-1)^p(x-1)^p(x+1)^p}{(x-1)^p(x+1)^p}} \Rightarrow [p, +\infty) \cup (-\infty, -1] \cup [0, 0]$

⑤ الف) $|x-p| - 1 \geq 0 \Rightarrow |x-p| \geq 1 \Rightarrow x-p \leq -1 \Rightarrow x \leq p-1$
 $x-p \geq 1 \Rightarrow x \geq p+1$
 ب) $f - |p-x| \geq 0 \Rightarrow |p-x| \leq f \Rightarrow -f \leq p-x \leq f \Rightarrow -f \leq x \leq p+f$
 $D_f = [-p-1, p+1]$

⑥ الف) $1 - x|x| \geq 0 \Rightarrow x|x| \leq 1 \Rightarrow x^2 \leq 1 \Rightarrow x \in [-1, 1]$
 ب) $\sqrt{p-|x-\omega|} \Rightarrow p-|x-\omega| \geq 0 \Rightarrow |x-\omega| \leq p \Rightarrow \omega-p \leq x \leq \omega+p$
 $D_f = [\omega-p, \omega+p]$

⑦ الف) $\cos \neq 0 \Rightarrow D_f = \mathbb{R} - \{k\pi + \frac{\pi}{2}\}$
 ب) $x \cos x \leq 1 \Rightarrow \cos x \leq \frac{1}{x} \Rightarrow D_f = \mathbb{R} - \{k\pi + \frac{\pi}{2}, k\pi - \frac{\pi}{2}\}$

⑧ الف) $|x_{n+1}| - |x_n + \omega| \leq 0 \Rightarrow |x_{n+1}| \leq |x_n + \omega| \Rightarrow (x_{n+1})^2 - (x_n + \omega)^2 \leq 0$
 $(x_{n+1} - x_n - \omega)(x_{n+1} + x_n + \omega) \leq 0$
 $D_f = (-\infty, -\frac{\omega}{2}] \cup [\frac{\omega}{2}, +\infty)$

⑨ $x_{n-1} > 0 \Rightarrow x_n \geq \frac{1}{p}$
 $\log \omega^{(x_n-1)} > 0 \Rightarrow x_{n-1} > 1 \Rightarrow x_n > 1$
 $\log \omega^{(x_{n-1}-1)} > 0 \Rightarrow \log \omega^{(x_{n-1}-1)} < 1 \Rightarrow x_{n-1} \leq \omega$
 $D_f = (1, \omega]$

(الف)

$$P \cos n + 1 > 0 \rightarrow \cos n > -\frac{1}{P}$$

$$D_2 = R_2 \left[PK\pi + \frac{C_0}{P}, PK\pi + \frac{C_0}{P} \right]$$

(ب)

$$\frac{n-1}{n+1} > 0 \quad \begin{array}{c} -1 \\ +1 \end{array} \quad \rightarrow \quad \log \frac{n-1}{n+1} > 0 \rightarrow \frac{n-1}{n+1} > 1 \rightarrow \frac{n-1}{n+1} - 1 > 0$$

$$D_3 = (-\infty, -1)$$

$$\frac{n-1-m-1}{n+1} > 0$$

$$\frac{-p}{n+1} > 0$$

$$\boxed{-1} < \frac{p}{n+1} < 0$$

$$\boxed{n < -1}$$