

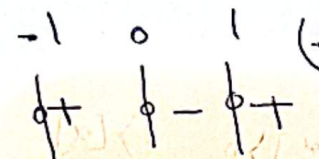
الف) $\sqrt{\sin x - 1} \geq 0 \quad \sin x \geq \frac{1}{p} \quad pk\pi + \frac{\pi}{4} \leq x \leq \frac{5\pi}{4} + pk\pi$
 $D = [\frac{\pi}{4} + pk\pi, \frac{5\pi}{4} + pk\pi]$

ب) $\cos x - 1 \geq 0 \quad \cos x \geq 1$
 $\hookrightarrow \cos x = 1 \rightarrow pk\pi$  $D = \{pk\pi\}$

الف) $-1 < |x| - p \leq 1 \quad p < |x| \leq p+1 \quad x \in [-p-1, -p] \cup [p, p+1]$

ب) $-1 < x^p + px + 1 \leq 1$
 $x^p + px \leq 0 \rightarrow x(x + \frac{p}{x}) \leq 0 \quad -\frac{p}{x} \leq x \leq 0$
 $0 \leq x^p + px + 1 \rightarrow (x+1)(x+p) \geq 0 \quad -1 \leq x \leq -p$
 $D = [-p-1, -p] \cup [p, p+1]$

الف) $x - p \geq 0 \quad x \geq p \quad p - \log(x+p) \geq 0 \quad \log(x+p) \leq p \quad x - p \leq 9 \quad x \leq 11$
 $(p, 11]$

ب) $x^3 - x \geq 0 \quad x(x-1)(x+1) \geq 0$
 $(-1, 0) \cup (1, +\infty)$

الف) $x^x + 1 \neq 0 \quad x^x \neq -1 \quad \checkmark \quad R$

ب) $x^x - 1 \neq 0 \quad x^x \neq 1 \quad x \neq 0 \quad R - \{0\}$

ج) $x^x - p \neq 0 \quad x^x \neq p \quad x \neq \log_p p \quad \log_p p = \frac{1}{p} \quad R - \{\frac{1}{p}\}$

د) $x^x - p \neq 0 \quad x^x \neq p \quad x \neq \log_p p \quad R - \{\log_p p\}$

الف) $x^x + 1 \in W \rightarrow x \in \frac{W}{x-1} \quad D = \{x | x \in \frac{k-1}{x}, k \in W\}$

ب) $\frac{p^x - p}{p^x - p} \in W \quad p^x w - p w = p^x - p \rightarrow p^x - p^x w = p - p w$
 $x(p - p w) = p - p w$
 $D = \{x | x \in \frac{p - p w}{p - p w}, k \in W\}$
 $\hookrightarrow x \in \frac{p - p w}{p - p w}$