

$$\textcircled{8} \text{ الف) } [x - \frac{1}{p}] + [x + \frac{2}{p}] \geq 0 \quad \text{و} \quad [x + \frac{2}{p}] \geq 1$$

$$[x + \frac{2}{p}] - 1 + [x + \frac{2}{p}] \geq 0 \quad \text{و} \quad [x + \frac{2}{p}] \geq \frac{1}{p}$$

$$x + \frac{2}{p} \geq 1 \quad D_f = [\frac{1}{p}, +\infty)$$

$$x \geq +\frac{1}{p}$$

$$\text{ب) } [x - \frac{1}{p}] + [-x + \frac{1}{p}] \geq 0$$

$$[x - \frac{1}{p}] [-x + \frac{1}{p}] \geq 0 \Rightarrow \begin{matrix} 0 = \frac{1}{p} & x \in \mathbb{Z} \\ -1 = \frac{1}{p} & x \notin \mathbb{Z} \end{matrix} \quad D_f = \{x \mid x = k + \frac{1}{p}, k \in \mathbb{Z}\}$$

$$\textcircled{9} \text{ الف) } \begin{matrix} \sin^2 x - 1 \neq 0 & \sin^2 \neq \frac{1}{p} \\ \sin^2 x \neq 1 & \sin \neq \sqrt{\frac{1}{p}} \end{matrix} \quad x \in \mathbb{R} \quad D_f = \mathbb{R}$$

$$\text{ب) } \frac{\cot x + 1}{\tan x + 1} \rightarrow \frac{\cos}{\sin} \rightarrow \neq 0 \rightarrow \mathbb{R} - 0, 1, \infty$$

$$\tan x + 1 \rightarrow \tan x + 1 \neq 0$$

$$D_f = \mathbb{R} - \{k\pi, k\pi + \frac{\pi}{p}, k\pi - \frac{\pi}{p}\}$$

$$90, 270 \leftarrow 0 \neq \leftarrow \frac{\sin}{\cos} \leftarrow \tan x \neq -1 \rightarrow 135, 225$$

$$\textcircled{10} \text{ الف) } \begin{matrix} \sin^2 - 1 \geq 0 \\ \sin^2 \geq 1 \end{matrix} \quad \sin \geq \frac{1}{p} \quad D_f = \mathbb{R} - (\frac{k\pi + \frac{\pi}{p}}{p}, \frac{k\pi + \frac{\pi}{p}}{p})$$


$$\text{ب) } \begin{matrix} 1 - \cos^2 \geq 0 \\ \cos^2 \leq 1 \end{matrix} \quad \cos \leq \frac{1}{p} \quad D_f = \mathbb{R} - (\frac{k\pi + \frac{\pi}{p}}{p}, \frac{k\pi - \frac{\pi}{p}}{p})$$


الف) $2-x \geq 0$ $\boxed{x \leq 2}$ $f = \sqrt{2-x} \geq 0$
 $-\sqrt{2-x} \geq -f$ $2-x \geq 14$ $-x \geq 12$ $\boxed{x \leq -12}$ $D_f = [-12, 2]$ باران سردی

ب) $x-2 \geq 0$ $\boxed{x \geq 2}$ $2\sqrt{x-2} \geq 0$ $x-2 \leq 9$ $\boxed{x \leq 11}$ $D_f = [2, 11]$

الف) $4-2x^2 \geq 0$ $x^2 \leq 2$ $D_f = [-\sqrt{2}, \sqrt{2}]$
 $2x^2 \leq 4$ $-\sqrt{2} \leq x \leq \sqrt{2}$

ب) $3|x|-9 \geq 0$ $|x| \geq 3$ $D_f = (-\infty, -3] \cup [3, +\infty)$
 $3|x| \geq 9$ $-3 \leq x \leq 3$

الف) $|x|-3 \neq 0$ $|x| \neq 3$ $x \neq -3, 3$ $D_f = \mathbb{R} - \{-3, 3\}$

ب) $x \geq 0$ $\sqrt{x}-3 \neq 0$ $x \neq 9$ $D_f = [0, +\infty) - \{9\}$
 $\sqrt{x} \neq 3$

الف) $|x|+2 \neq 0$ $3-|x| \geq 0$ $D_f = [-3, 3]$
 $|x| \neq -2$ $|x| \leq 3$
 $x \in \mathbb{R}$ $-3 \leq x \leq 3$

ب) $|x|-1 \neq 0$ $4-x^2 \geq 0$ $D_f = [-2, 2] - \{-1, 1\}$
 $|x| \neq 1$ $x \neq -1, 1$ $x^2 \leq 4$ $-2 \leq x \leq 2$

الف) $\sqrt{x+|x|}$ $\begin{matrix} +\sqrt{x} \\ 0 \\ -x \end{matrix}$ $D_f = (0, +\infty)$

ب) $\sqrt{x|x|}$ $\begin{matrix} +\sqrt{x} \\ 0 \\ -x \end{matrix}$ $D_f = (0, +\infty)$

الف) $2-[x] \geq 0$ $[x] \leq 2$ $x < 3$ $D_f = (-\infty, 3)$

ب) $2-[x] > 0$ $[x] < 2$ $x < 2$ $D_f = (-\infty, 2)$

الف) $x[x] \neq 0$ $D_f = \mathbb{R} - [0, 1)$
 $x \neq 0$ $[x] \neq 0$
 $0 \leq x < 1$

ب) $-x[x] > 0$ $\begin{matrix} +x \\ 0 \\ -x \end{matrix}$ $D_f = \emptyset$