

الف) $4 - \sqrt{2-n} \geq 0 \rightarrow 4 \geq \sqrt{2-n} \rightarrow 16 \geq |2-n| \Rightarrow n = 18, 14$
 $\Rightarrow D_f = [18, -14]$ $D_g = [-14, 2]$ ۱۵

ب) $3 - \sqrt{n-2} \geq 0 \Rightarrow 3 \geq \sqrt{n-2} \Rightarrow 9 \geq |n-2| \Rightarrow 9 \geq n-2 \Rightarrow -9 \leq n$
 $D_f = [11, -7]$ $D_g = [2, 11]$

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

ب) $3|n| - 9 \geq 0 \rightarrow 3|n| \geq 9 \rightarrow |n| \geq 3 \rightarrow$
 $D_f = [3, +\infty) \cup (-\infty, -3]$ ۲

الف) $|n| - 3 \neq 0 \Rightarrow |n| \neq 3 \Rightarrow n \neq \pm 3 \rightarrow D_f = \mathbb{R} - \{3, -3\}$ ✓

ب) $\begin{cases} \sqrt{n} - 3 \neq 0 \rightarrow \sqrt{n} \neq 3 \Rightarrow |n| \neq 9 \\ n \geq 0 \rightarrow n \in \mathbb{R}^+ \cup \{0\} \end{cases}$
 $I \cup II \xrightarrow{D_f} [0, 9) \cup (9, +\infty)$ ✓ ۲

الف) $\begin{cases} 3 - |n| \geq 0 \Rightarrow 3 \geq |n| \Rightarrow [-3, 3] \text{ I} \\ |n| + 2 \neq 0 \Rightarrow |n| \neq -2 \Rightarrow \mathbb{R} \text{ II} \end{cases}$
 $I \cap II \Rightarrow D_f = [-3, 3]$ ✓ ۲

ب) $\begin{cases} 4 - n^2 \geq 0 \rightarrow 4 \geq n^2 \Rightarrow 2 \geq |n| \rightarrow 2 \geq n \geq -2 \rightarrow [-2, 2] \text{ I} \\ |n| - 1 \neq 0 \Rightarrow |n| \neq 1 \Rightarrow \begin{cases} n \neq 1 \\ n \neq -1 \end{cases} \text{ II} \end{cases}$
 $I \cap II \Rightarrow [-2, 2]$ ✓
 $n + |n| > 0 \rightarrow [1, +\infty)$
 $D_g = (0, +\infty)$ ۱

ب) $n|n| > 0 \Rightarrow D_f = \mathbb{R}^+$ ✓

$$x - [x] > 0 \Rightarrow x > [x] \Rightarrow D_f = (-\infty, 1) \quad (الف)$$

$$x - [x] > 0 \Rightarrow x > [x] \Rightarrow D_f = (-\infty, 1) \quad (ب)$$

$$n[x] \neq 0 \Rightarrow \begin{cases} n=0 \text{ I} \\ n=(1,0) \text{ II} \end{cases} \Rightarrow (1,0) \quad (الف)$$

$$D_f = (-\infty, 0) \cup [1, +\infty) \quad (ب)$$

$$-n[x] > 0 \Rightarrow \text{مجموعه تهی یا کم صغری شمر} \Rightarrow \emptyset \quad (ب)$$

$$[n - \frac{1}{x}] + [n + \frac{1}{x}] \geq 0 \quad (الف)$$

$$D_f = (0, +\infty) \quad D_f = [\frac{1}{x}, +\infty) \quad (ب)$$

$$[n - \frac{1}{x}] + [-n + \frac{1}{x}] \geq 0 \Rightarrow D_f = (0, +\infty) - \mathbb{Z} \quad D_f = \{a \mid a = k + \frac{1}{x}, k \in \mathbb{Z}\} \quad (ب)$$

$$x \sin^2 n - 1 \neq 0 \Rightarrow x \sin^2 n \neq 1 \Rightarrow \sin^2 n \neq \frac{1}{x} \Rightarrow \quad (الف)$$

$$D_f = \mathbb{R} - \left\{ \frac{1}{\sin^2 n} \mid n \in \mathbb{R} \right\} \quad D_f = \mathbb{R} - \left\{ \frac{k\pi}{x}, k \in \mathbb{Z} \right\} \quad (ب)$$

$$\tan n + 1 \neq 0 \Rightarrow \tan n \neq -1 \Rightarrow D_f = \mathbb{R} - \left\{ \frac{k\pi}{x}, k \in \mathbb{Z} \right\} \quad D_f = \mathbb{R} - \left\{ \frac{k\pi}{x}, k \in \mathbb{Z} \right\} \quad (ب)$$

$$x \sin n - 1 \geq 0 \Rightarrow x \sin n \geq 1 \Rightarrow \sin n \geq \frac{1}{x} \quad (الف)$$

$$D_f = \left[\frac{1}{x}, 1 \right] \quad (ب)$$

$$1 - x \cos n \geq 0 \Rightarrow 1 \geq x \cos n \Rightarrow \frac{1}{x} \geq \cos n \Rightarrow \quad (الف)$$

$$D_f = \left[\frac{1}{x}, 1 \right] \quad (ب)$$