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الف) $2-x > 0$ $\boxed{2 > x} \text{ I}$ $I \cap II = Df \Rightarrow Df = [1, 2]$ $4 - \sqrt{1-x} > 0$ $4 > \sqrt{1-x}$ $16 > 1-x \rightarrow 14 > -x$ $\boxed{-14 < x} \text{ II}$	ب) $x-2 > 0$ $\boxed{x > 2} \text{ I}$ $Df = I \cap II \rightarrow Df = [2, 11]$ $3 - \sqrt{x-2} > 0$ $3 > \sqrt{x-2}$ $9 > x-2$ $\boxed{11 > x} \text{ II}$	۱
الف) $4-2x^2 > 0$ $4 > 2x^2$ $2 > x^2$ $\sqrt{2} > x$ $Df = (-\infty, \sqrt{2}]$ $Df = [-\sqrt{2}, \sqrt{2}]$	ب) $3 x -9 > 0$ $3 x > 9$ $x > 3 \rightarrow x < -3 \text{ I}$ $x > 3 \rightarrow x > 3 \text{ II}$ $Df = I \cap II \rightarrow Df = [3, \infty) \cup (-\infty, -3]$	۲
الف) $3- x > 0$ $3 > x$ $Df = I \cap II \rightarrow [-3, 3] = Df$ مخرج هم‌صورت صورتی شود	ب) $4-x^2 > 0$ $4 > x^2 \rightarrow -2 < x < 2$ $x < 2$ $x -1 \neq 0 \rightarrow x \neq 1 \rightarrow x \neq \pm 1$ $Df = [-2, 2] - \{\pm 1\}$ $Df = I \cap II \rightarrow Df = [2, \infty)$	۳
الف) $x -3 > 0$ $x > 3$ $x > 3 \rightarrow x > 3 \text{ I}$ $x > 3 \rightarrow x < -3 \text{ II}$ $Df = I \cap II \rightarrow Df = (-\infty, -3) \cup (3, \infty)$ $Df = \mathbb{R} - \{-3, +3\}$	ب) صورت = $x > 0$ $x > 0$ $\sqrt{x}-3 > 0 \rightarrow \sqrt{x}-3 \neq 0$ $\sqrt{x} > 3 \rightarrow \sqrt{x} \neq 3 \rightarrow x \neq 9$ $x > 9 \rightarrow Df = (9, \infty)$ $Df = [0, +\infty) - \{9\}$	۴
الف) $x+ x > 0$ $x > - x$ $Df = [0, \infty)$ $Df = (0, +\infty)$	ب) $x x > 0$ $x x > 0$ $x > 0 \rightarrow -2 < x < 4$ $x > 0 \rightarrow 2 < x < 4$ $x > 0 \rightarrow 0 < x < 4$ $Df = [1, \infty)$ $Df = (0, +\infty)$	۵

د) $1 - [x] > 0$ $1 > [x]$ $1 > x$ $DF = (-\infty, 1)$ ✓	$1 - [x] > 0$ $1 > [x]$ $1 > x$ $DF = (-\infty, 1)$ ✓	6
الف) $x[x] > 0$ $x[x] \neq 0$ $DF = \mathbb{R}$ $DF = \mathbb{R} - [0, 1)$ بین هم علامت هستند و در این صورت	ب) $-x[x] > 0$ $x[x] < 0$ $DF = \emptyset$ ✓	7
الف) $DF = [\frac{1}{p} + \infty)$ $DF = (-\infty, \frac{1}{p}]$ $[x - \frac{1}{p}] + [x + \frac{1}{p}] > 0$ $x > \frac{1}{p}$ ✓ $[x + \frac{1}{p} - \frac{1}{p}] + [x + \frac{1}{p}] > 0$ $x + \frac{1}{p} > 1$ $2[x + \frac{1}{p}] - \frac{1}{p} > 0$ $2[x + \frac{1}{p}] > \frac{1}{p} \rightarrow [x + \frac{1}{p}] > \frac{1}{2p}$	ب) $y = \sqrt{[x - \frac{1}{p}]} + [- (x - \frac{1}{p})]$ $x = z \rightarrow [x - \frac{1}{p}] + [- (x - \frac{1}{p})] = 0$ $x - \frac{1}{p} \in \mathbb{Z}$ $DF = \{x \mid x = k + \frac{1}{p}, k \in \mathbb{Z}\}$ ✓	1, 1/5
الف) $2 \sin^2 x - 1 = 0$ $2 \sin^2 x = 1$ $DF = \mathbb{R} - \{\frac{k\pi}{2} + \frac{\pi}{4}\}$ $\sin^2 x = \frac{1}{2}$ $\sin x = \frac{1}{\sqrt{2}}$ $\Rightarrow \sin x = \pm \frac{1}{\sqrt{2}} \rightarrow x = 45^\circ, 135^\circ, 225^\circ, 315^\circ, \dots$	ب) $\frac{\sin x}{\cos x} + 1 = 0 \Rightarrow \frac{\sin x}{\cos x} = -1$ ① $\tan x \neq -1$ $\sin x = -\cos x$ $\tan x \neq -1$ $x = 135^\circ, 225^\circ$ $\cot x \neq 0$ $DF = \{k\pi - \frac{\pi}{4}\}$ $DF = \mathbb{R} - \{\frac{k\pi}{2}, k\pi - \frac{\pi}{4}\}$	9
الف) $2 \sin x - 1 > 0$ $2 \sin x > 1$ $\sin x > \frac{1}{2}$ ✓ $DF = [\frac{\pi}{6} + 2k\pi, \frac{5\pi}{6} + 2k\pi)$	ب) $1 - 2 \cos x > 0$ $1 > 2 \cos x$ $\frac{1}{2} > \cos x$ ✓ $DF = \mathbb{R}$ $-1 < \cos x < 1$	1, 1/5