

الف) $2-x \geq 0 \rightarrow x \leq 2 \rightarrow 4-\sqrt{2-x} \geq 0 \rightarrow \sqrt{2-x} \leq 2 \rightarrow 2-x \leq 4 \rightarrow x \geq -2$ $-2 \leq x \leq 2$

ب) $x-2 \geq 0 \rightarrow x \geq 2$

$3-\sqrt{x-2} \geq 0 \rightarrow 3 \geq \sqrt{x-2} \rightarrow 9 \geq x-2 \rightarrow x \leq 11$ $2 \leq x \leq 11$

الف) $14-2x^2 \geq 0 \rightarrow 14 \geq 2x^2 \rightarrow 7 \geq x^2 \rightarrow \sqrt{7} \geq x \geq -\sqrt{7}$

ب) $3|x|-9 \geq 0 \rightarrow 3|x| \geq 9 \rightarrow |x| \geq 3 \rightarrow x \geq 3, x \leq -3$

الف) $|x|-2 \neq 0 \rightarrow |x| \neq 2 \rightarrow x \neq -2, 2$

ب) $x \geq 0, \sqrt{x-2} \geq 0 \rightarrow \sqrt{x} \geq 3 \rightarrow x \geq 9$

الف) $3-|x| \geq 0 \rightarrow 3 \geq |x| \rightarrow -3 \leq x \leq 3$ مخرج صفر نمی شود چون جمع دو عبارت مثبت است

ب) $14-x^2 \geq 0 \rightarrow 14 \geq x^2 \rightarrow \sqrt{14} \geq x \geq -\sqrt{14} \rightarrow D_f = (-\sqrt{14}, \sqrt{14})$

$|x|-1 \neq 0 \rightarrow |x| \neq 1 \rightarrow x \neq 1, -1$

الف) $x+|x| > 0 \rightarrow D_f = \mathbb{R}^+$

ب) $x|x| > 0 \rightarrow D_f = \mathbb{R}^+$

الف) $2 - [x] \geq 0 \rightarrow [x] \leq 2 \rightarrow x < 3$

ب) $2 - [x] > 0 \rightarrow 2 > [x] \rightarrow x < 2$

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

ب) $-x[x] > 0 \rightarrow x[x] < 0 \rightarrow D_f = R^-$

الف) $[x + \frac{1}{p}] - 1 + [x + \frac{p}{p}] \geq 0 \rightarrow [x + \frac{p}{p}] \geq \frac{1}{p} \rightarrow x + \frac{p}{p} \geq 1$

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

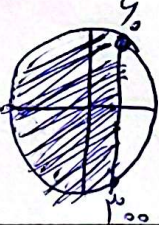
ب) چون گزینه است $\rightarrow D_f = \{x | x = k + \frac{1}{p}, k \in \mathbb{Z}\}$
 پس مثل قانون $[x] = [x]$ است

الف) $2 \sin^2 x - 1 > 0 \rightarrow 2 \sin^2 x > 1 \rightarrow \sin^2 x > \frac{1}{2} \rightarrow \sin x > \frac{1}{\sqrt{2}} \rightarrow 1) \sin x > \frac{1}{\sqrt{2}} \rightarrow 30^\circ < x < 150^\circ$
 $2) \sin x < -\frac{1}{\sqrt{2}} \rightarrow 210^\circ < x < 330^\circ$
 $D_f = R - (k\pi - \frac{\pi}{4}, k\pi + \frac{\pi}{4})$

ب) $\sin \neq 0 \rightarrow \pi, 2\pi$ $\tan \neq -1 \rightarrow \frac{3\pi}{4}, \frac{5\pi}{4}$
 $\cos \neq 0 \rightarrow \frac{3\pi}{2}, \frac{\pi}{2}$

$D_f = R - [\frac{k\pi}{p}, k\pi - \frac{\pi}{p}]$

الف) $2 \sin x - 1 \geq 0 \rightarrow \sin x \geq \frac{1}{2} \rightarrow$  $\rightarrow D_f = [2k\pi + \frac{\pi}{6}, 2k\pi + \frac{5\pi}{6}]$

ب) $1 - 2 \cos x \geq 0 \rightarrow 1 \geq 2 \cos x \rightarrow \frac{1}{2} \geq \cos x \rightarrow$  $\rightarrow D_f = R - (k\pi - \frac{\pi}{3}, k\pi + \frac{\pi}{3})$