

$$\sqrt{x-2} \rightarrow x \geq 2$$

$$x \leq 11 \quad P = [2, 11] \quad (ب)$$



15

(د)

$$\sqrt{2-x} \rightarrow x \leq 2$$

$$x \geq -11 \quad P = [2, -11] \quad (الف)$$



(1)

$$\text{منفی } x \leq -3$$

$$\text{مثبت } x \geq 3$$

$$P = [3, +\infty) \cup [-3, \infty) \quad (ب)$$



(1)

$$x = \sqrt{2(2-x^2)}$$

$$x \leq 1$$

$$x \geq -1$$

$$P = [1, -1] \quad (الف)$$

(2)

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

مثبت

$$\sqrt{x+1} \rightarrow x \geq -1$$

$$\text{مخرج} = \sqrt{x-3} \rightarrow x \neq 9$$

$$P = R - \{9\} \quad (ب)$$

$$[9, +\infty)$$

(1)

$$P = R - \{3, -3\}$$

(الف)

(3)

$$\text{صورت} = -2 \leq x \leq 2$$

$$\text{مخرج} = x \neq \pm 1$$

$$P = [2, -2] - \{\pm 1\} \quad (ب)$$

(د)



$$\text{صورت} = -3 \leq x \leq 3$$

$$\text{مخرج} = \text{مجموعه مثبت} = P = [3, -3]$$

(الف)

(4)

$$\text{مخرج} = R^+$$

$$P = R^+ \quad (ب)$$

(ب)



(د)

$$\text{صورت} = R \quad \text{مخرج} = x > 0 \quad P = R^+ \quad (الف)$$

(5)

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



$$P = (2, -\infty) \quad (-\infty, 2)$$

(ب)

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

$$P = (2, \infty) \quad (-\infty, 3)$$

(الف)

(6)

$$\sqrt{-x[x]} \rightarrow \text{همیشه منفی یا 0 شود}$$

$$P = \emptyset$$

(ب)

(د)

$$[x] \text{ با } x \text{ همیشه هم علامت است}$$

$$\text{مخرج} = x \neq 0$$

$$P = R - \{0\}$$

$$R - [0, 1)$$

(الف)

(7)

$$[x - \frac{1}{x}] + [-(x - \frac{1}{x})] \rightarrow [a] + [-a] = 0 \quad (ب)$$

$$a \in \mathbb{Z}$$

$$P = \{x \mid x = k + \frac{1}{x}, k \in \mathbb{Z}\} \quad x - \frac{1}{x} \in \mathbb{Z}$$



(د)

$$[x + \frac{y}{x}] - 1 + [x + \frac{y}{x}] \geq 0$$

(الف)

(8)

$$2[x + \frac{y}{x}] \geq 1 \quad P = [\frac{1}{2}, +\infty)$$

$$[x + \frac{y}{x}] \geq \frac{1}{2} \rightarrow x + \frac{y}{x} \geq \frac{1}{2} \rightarrow x \geq \frac{1}{2}$$

$$\sin x \neq 0 \rightarrow x \neq k\pi$$

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

$$\cos x \neq 0$$

$$P = R - \{k\pi + \frac{\pi}{2}, k\pi - \frac{\pi}{2}\}$$



(ب)

(1)

$$x \sin^2 x - 1 \neq 0$$

$$\sin^2 x \neq \frac{1}{x}$$

$$\sin^2 x \neq \frac{1}{x} \rightarrow \sin^2 x \neq \frac{1}{x}$$

$$P = R - \{2k\pi + \frac{\pi}{2}, 2k\pi + \frac{3\pi}{2}\}$$



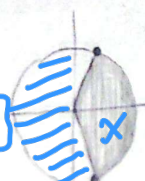
(الف)

(9)

$$1 - 2\cos x \geq 0 \rightarrow \cos x \leq \frac{1}{2}$$

$$P = [2k\pi + \frac{2\pi}{3}, 2k\pi + \frac{4\pi}{3}]$$

$$[2k\pi + \frac{2\pi}{3}, 2k\pi + \frac{4\pi}{3}]$$



(ب)

$$x \sin^2 x - 1 \geq 0 \rightarrow \sin^2 x \geq \frac{1}{x}$$

$$P = [2k\pi + \frac{\pi}{2}, 2k\pi + \frac{3\pi}{2}]$$



(الف)

(10)