

$$y = \sqrt{F - \sqrt{P - x}} = F - \sqrt{P - x} \geq 0 \rightarrow F \geq \sqrt{P - x} \quad \text{الف}$$

$$P - x \geq 0 \rightarrow x \leq P \quad \text{ب}$$

$$x \geq -P \quad \text{ج}$$

$$y = \sqrt{P - \sqrt{x - P}} = P - \sqrt{x - P} \geq 0 \rightarrow P \geq \sqrt{x - P} \quad \text{الف}$$

$$x - P \geq 0 \rightarrow x \geq P \quad \text{ب}$$

$$x \geq -P \quad \text{ج}$$

$$y = \sqrt{F - Px^P} = F - Px^P \geq 0 \rightarrow F \geq Px^P \rightarrow P \geq x^P \quad \text{الف}$$

$$\pm \sqrt{P} \geq x \rightarrow [-P, +P] \quad \text{ب}$$

$$y = \sqrt{P|x| - 9} = P|x| - 9 \geq 0 \rightarrow |x| \geq \frac{9}{P} \rightarrow x \geq \frac{9}{P} \text{ or } x \leq -\frac{9}{P} \quad \text{الف}$$

$$[\frac{9}{P}, +\infty) \cup (-\infty, -\frac{9}{P}] \quad \text{ب}$$

$$y = \sqrt{\frac{P}{|x|+1}} = \frac{P}{|x|+1} \geq 0 \rightarrow |x|+1 \neq 0 \rightarrow |x| \neq -1 \rightarrow x \neq \pm \infty \quad \text{الف}$$

$$\mathbb{R} - \{-1, +1\} \quad \text{ب}$$

$$y = \sqrt{\frac{P}{\sqrt{x}+1}} = \frac{P}{\sqrt{x}+1} \geq 0 \rightarrow \sqrt{x}+1 \neq 0 \rightarrow \sqrt{x} \neq -1 \rightarrow x \neq 0 \quad \text{الف}$$

$$D_f = \mathbb{R}^+ - \{0\} \quad \text{ب}$$

$$y = \frac{\sqrt{P-|x|}}{|x|+1} \rightarrow \sqrt{P-|x|} \geq 0 \rightarrow |x| \leq P \rightarrow x \in [-P, P] \quad \text{الف}$$

$$D_f = [-P, P] \quad \text{ب}$$

$$y = \sqrt{\frac{P-x^P}{|x|-1}} = \frac{P-x^P}{|x|-1} \geq 0 \rightarrow P-x^P \geq 0 \rightarrow P \geq x^P \rightarrow x \in [-P, P] \quad \text{الف}$$

$$D_f = [-P, P] \quad \text{ب}$$

$$y = \frac{x+1}{\sqrt{x+|x|}} = x+|x| \geq 0 \rightarrow |x| \geq -x \rightarrow x \geq 0 \quad \text{الف}$$

$$D_f = \mathbb{R} - \{0\} \quad \text{ب}$$

$$y = \frac{1}{\sqrt{x|x|}} = x|x| \geq 0 \rightarrow D_f = (0, +\infty) \rightarrow \mathbb{R}^+ \quad \text{الف}$$

$$D_f = (0, +\infty) \rightarrow \mathbb{R}^+ \quad \text{ب}$$

الف	$y = \sqrt{p - [x]} \quad p - [x] \geq 0 \rightarrow p \geq [x] \rightarrow x < p \rightarrow$ $D_f = (-\infty, p)$	٦
ب	$y = \frac{1}{\sqrt{p - [x]}} \rightarrow [x] > p \rightarrow [x] \geq p \rightarrow x \geq p$ $D_f = [p, +\infty)$	٧
الف	$y = \frac{1}{x[x]} \rightarrow D_f = \mathbb{R} - \{0\}$ مخرجها صفر كنز خلاف المعطى	٨
ب	$y = \frac{1}{\sqrt{-x[x]}} \Rightarrow$ $-x[x] > 0 \rightarrow x[x] < 0 \rightarrow D_f = \emptyset$	٩
الف	$y = \sqrt{[x - \frac{1}{p}] + [x + \frac{p}{p}]} = [x - \frac{1}{p}] + [x + \frac{p}{p}] \geq 0 \quad D_f = [-\frac{p}{p}, +\infty)$ $[x - \frac{1}{p}] + [x + \frac{p}{p} - 1] \geq 0 \rightarrow [x - \frac{1}{p}] + [x - \frac{1}{p}] - 1 \geq 0$ $p[x - \frac{1}{p}] \geq 1 \rightarrow [x - \frac{1}{p}] \geq \frac{1}{p} \rightarrow x - \frac{1}{p} \geq \frac{1}{p} \rightarrow x \geq \frac{2}{p}$ $y = \sqrt{[x - \frac{1}{p}] + [x + \frac{1}{p}]} \rightarrow \begin{cases} \alpha \in \mathbb{Z} \rightarrow [\alpha] + [-\alpha] = 0 \\ \alpha \notin \mathbb{Z} \rightarrow [\alpha] + [-\alpha] = -1 \end{cases} \rightarrow x - \frac{1}{p} \geq \frac{1}{p}$ $D_f = \{x \mid x = k + \frac{1}{p}, k \in \mathbb{Z}\}$	١٠
الف	$y = \frac{1}{p \sin^p x - 1} \Rightarrow p \sin^p x \geq 1 \rightarrow$ $D_f = \mathbb{R} - \{k\pi \pm \frac{\pi}{2}\}$ $\sin x \geq \pm \sqrt{\frac{1}{p}} \times \frac{\sqrt{p}}{\sqrt{p}} = \pm \frac{\sqrt{p}}{p}$	١١
ب	$y = \frac{\cos x + 1}{\tan x + 1} \Rightarrow \begin{cases} \sin x \neq 0 \rightarrow 0 \neq 1 \rightarrow \{k\pi\} \\ \tan x + 1 \neq 0 \rightarrow \tan x \neq -1 \rightarrow k\pi - \frac{\pi}{4} \neq k\pi + \frac{\pi}{4} \end{cases}$ $\mathbb{R} - \{k\pi - \frac{\pi}{4}, k\pi + \frac{\pi}{4}\}$	١٢
الف	$y = \sqrt{p \sin x - 1} \Rightarrow \sin x \geq \frac{1}{p} \rightarrow \{2k\pi + \frac{\pi}{p}, 2k\pi + \pi - \frac{\pi}{p}\}$	١٣
ب	$y = \sqrt{1 - p \cos x} \Rightarrow p \cos x \leq 1 \rightarrow \cos x \leq \frac{1}{p}$ $D_f = \{k\pi + \frac{\pi}{p}, k\pi - \frac{\pi}{p}\}$	١٤