

الف) $2-m \geq 0 \rightarrow 1-m \geq 0 \rightarrow 2 \geq m \rightarrow (-\infty, 2]$ $\cap$

$4-\sqrt{2-m} \geq 0 \rightarrow 4 \geq \sqrt{2-m} \rightarrow 16 \geq 2-m \rightarrow m \geq -14 \rightarrow [-14, +\infty)$
 $[-14, 2]$

ب) $y = \sqrt{3-\sqrt{m-2}}$: $m-2 \geq 0 \rightarrow m \geq 2 \rightarrow \text{domain}$ $[2, +\infty)$ $[2, 11]$
 $2-\sqrt{m-2} \geq 0 \rightarrow 2 \geq \sqrt{m-2} \rightarrow 4 \geq m-2 \rightarrow 11 \geq m \rightarrow (-\infty, 11]$

الف) $y = \sqrt{4-2m^2} \rightarrow 4-2m^2 \geq 0 \rightarrow 4 \geq 2m^2 \rightarrow 2 \geq m^2 \rightarrow -\sqrt{2} \leq m \leq \sqrt{2}$
 $[-\sqrt{2}, \sqrt{2}]$

ب) $y = \sqrt{3|m|-9} = 3|m|-9 \geq 0 \rightarrow 3|m| \geq 9 \rightarrow |m| \geq 3$
 $(-\infty, -3] \cup [3, +\infty)$

الف) $y = \sqrt[3]{\frac{|m|+1}{|m|-3}}$ $\mathbb{R} - \{-3, 3\}$

ب) $y = \sqrt[3]{\frac{\sqrt{m}+1}{\sqrt{m}-3}} = \sqrt{m}-3 \neq 0 \rightarrow \sqrt{m} \neq 3 \rightarrow m \neq 9$
 $[0, +\infty) - \{9\}$

الف) $y = \frac{\sqrt{3-|m|}}{|m|+2} \rightarrow 3-|m| \geq 0 \rightarrow 3 \geq |m| \rightarrow -3 \leq m \leq 3$
 $[-3, 3]$

ب) $y = \frac{\sqrt{4-m^2}}{|m|-1} \rightarrow 4-m^2 \geq 0 \rightarrow m^2 \leq 4 \rightarrow -2 \leq m \leq 2$
 $|m|-1 \rightarrow m \neq 1, -1 \rightarrow [-2, 2] - \{-1, 1\}$

الف) $y = \frac{m+1}{\sqrt{m+|m|}} \rightarrow m+|m| \neq 0$
 $(-\infty, 0) \cup (0, \infty)$

ب) $y = \frac{1}{\sqrt{m|m|}} \rightarrow (0, +\infty)$

الف) $y = \sqrt{2 - [n]} \geq (-\infty, 3)$

ب) $\frac{1}{\sqrt{2 - [n]}} = (-\infty, 2)$ (4)

الف) $y = \frac{1}{n[n]}$ $(-\infty, 0] \cup [1, +\infty)$

ب) $y = \frac{1}{\sqrt{-n[n]}}$ $\mathbb{R}^+ \cup \mathbb{N}$ (5)

الف) $\rightarrow [n - 1/p] - [n + 1/p] \geq 0 \rightarrow [n + 1/p - 1] + [n + 1/p] \geq 0$ (1)

$[n + 1/p] - 1 + [n + 1/p] \geq 0 \rightarrow 2[n + 1/p] \geq 1 \rightarrow [n + 1/p] \geq 1/2 \Rightarrow n - 1/p \geq 1 \Rightarrow n \geq 1/p$
 $[1/p > +\infty)$

ب) $\rightarrow [n - 1/p] + [-(n - 1/p)] \geq 0 \rightarrow \begin{cases} n \in \mathbb{Z} \rightarrow [a] + [-a] = 0 \\ n \notin \mathbb{Z} \rightarrow [a] + [-a] = -1 \end{cases}$
 $n - 1/p \in \mathbb{Z}$
 $\{n \mid n = k + 1/p, k \in \mathbb{Z}\}$

الف) $|\sin^2 n - 1| \neq 0 \rightarrow \sin^2 n \neq 1 \rightarrow \sin^2 n \neq 1/p \rightarrow \sin n \neq \frac{1}{\sqrt{p}}$

$D_f = \mathbb{R} - \left\{ k\pi + \frac{\pi}{2}, k\pi + \frac{\pi}{2} \right\}$

ب) $\tan n \neq 1$
 $\frac{\sin n}{\cos n} \neq 1 \rightarrow \cos n \neq 0$

الف) $y = \sqrt{2 \sin n - 1} \rightarrow 2 \sin n - 1 \geq 1 \rightarrow 2 \sin n \geq 2$

$\sin n \geq 1/p$

ب) $y = \sqrt{1 - 2 \cos n} \rightarrow 1 - 2 \cos n \geq 0 \rightarrow 2 \cos n \leq 1$

$\cos n \leq 1/p$