

الف) $y = \sqrt{x^2-1} + \sqrt{x-2}$ $x^2-1 \geq 0 \rightarrow x^2 \geq 1 \rightarrow x \leq -1 \text{ یا } x \geq 1$
 $x-2 \geq 0 \rightarrow x \geq 2$ $\rightarrow [2, +\infty)$
 ب) $y = \frac{\sqrt{4-3x}}{\sqrt{4x-3}}$ $4-3x \geq 0 \rightarrow 3x \leq 4 \rightarrow x \leq \frac{4}{3}$
 $4x-3 \geq 0 \rightarrow 4x \geq 3 \rightarrow x \geq \frac{3}{4}$ $\rightarrow [\frac{3}{4}, \frac{4}{3}]$
 قریب نه من: آنه شود $\rightarrow$ بین مخرج نه مخرج $\rightarrow$ در زیر انکال مخرج

$y = \sqrt{4x-a} + \sqrt{b-3x} \rightarrow D = \{x\}$

$\frac{b}{a} = ? \rightarrow \frac{b}{a} = \frac{4}{12} (\frac{1}{3})$

1) $4x-a \geq 0 \rightarrow 4x \geq a \rightarrow x \geq \frac{a}{4}$
 2) $b-3x \geq 0 \rightarrow b \geq 3x \rightarrow x \leq \frac{b}{3}$
 من $[\frac{a}{4}, \frac{b}{3}]$ $\frac{a}{4} = \frac{b}{3} - 2$
 $\frac{a}{4} = \frac{b}{3} - 2 \rightarrow \frac{a}{4} = \frac{b}{3} - 2$
 $\frac{a}{4} = \frac{b}{3} - 2 \rightarrow \frac{a}{4} = \frac{b}{3} - 2$

الف) $y = \sqrt{\frac{x^2-x-4}{x^2-13x+44}}$ $\rightarrow \frac{(x-4)(x+1)}{(x-4)(x-11)} \geq 0$
 $\rightarrow \frac{x+1}{x-11} \geq 0$ $\rightarrow D = (-\infty, -1) \cup (11, +\infty)$
 ب) $y = \frac{\sqrt{x^2-2x-8x+4}}{\sqrt{x^2+2x^2-8x-4}}$ $\rightarrow \frac{(x-1)(x-3)(x+1)}{(x+1)(x+3)(x-2)} \geq 0$
 $\rightarrow \frac{(x-1)(x-3)}{(x+3)(x-2)} \geq 0$ $\rightarrow D = (-\infty, -1) \cup [1, 2) \cup [3, +\infty)$
 الف) $y = \sqrt{2[x]-4} \rightarrow 2[x]-4 \geq 0 \rightarrow 2[x] \geq 4 \rightarrow [x] \geq 2 \rightarrow x \geq 2$
 $\rightarrow D = [2, +\infty)$

$y = \sqrt{2[x]-8} \rightarrow 2[x]-8 \geq 0 \rightarrow 2[x] \geq 8 \rightarrow [x] \geq 4 \rightarrow [x] \geq 4, 8$
 $\rightarrow D = [4, +\infty)$

الف) $y = \sqrt{\frac{x+1}{x^2-3}} + \sqrt{\frac{4-x}{x^2+2x+4}}$ $\frac{x+1}{x^2-3} \geq 0 \rightarrow \frac{x+1}{(x-\sqrt{3})(x+\sqrt{3})} \geq 0$
 $\rightarrow D = (-1, \sqrt{3}) \cup (3, +\infty)$
 ب) $y = \sqrt{[x]-4} + \sqrt{4-[x]}$ $[x]-4 \geq 0 \rightarrow [x] \geq 4 \rightarrow x \geq 4$
 $4-[x] \geq 0 \rightarrow [x] \leq 4 \rightarrow x \leq 4$
 $\rightarrow D = \emptyset$