

$$D_f = [-3, +\infty) \Rightarrow y = ax + b$$

از x^2 ضربه: $\Rightarrow a = 2 \Rightarrow a = 2 \Rightarrow y = \sqrt{2x+b} \xrightarrow{x=3} \sqrt{4+b} \Rightarrow b = -4$

$$\Rightarrow x^2 + 2x + 2 - m^2 \geq 0 \Rightarrow \underbrace{(x+1)^2} + 1 - m^2 \geq 0 \Rightarrow 1 - m^2 \geq 0 \Rightarrow m^2 \leq 1 \Rightarrow -1 \leq m \leq 1 \Rightarrow 1 - (-1) = 2$$

$$\Rightarrow \begin{cases} 4 - x^2 \geq 0 \Rightarrow x^2 \leq 4 \Rightarrow -2 \leq x \leq 2 \Rightarrow [-2, 2] \\ [x] + [-x] + 1 \neq 0 \Rightarrow \text{if } x \in \mathbb{Z} \rightarrow [x] + [-x] = 0 \Rightarrow \text{مضرب اول منفرجه} \end{cases}$$

$$\text{الف) } \Rightarrow x^3 + 3x^2 \geq 0 \Rightarrow x^2(x+3) \geq 0 \Rightarrow \begin{matrix} -3 & 0 & 3 \\ | & + & | \\ - & + & + \end{matrix} \Rightarrow D_f = [-3, +\infty)$$

$$\text{ب) } \Rightarrow \sqrt{\frac{(x+1)(x-1)(x^2)(x-3)}{(x-1)(x^2+x+1)}} \Rightarrow \begin{matrix} -1 & 0 & 1 & 3 \\ | & + & | & + \\ + & - & - & + \end{matrix} \Rightarrow D_f = (-\infty, -1] \cup \{0\} \cup [3, +\infty)$$

$$\text{الف) } \Rightarrow |x-2| - 3 \geq 0 \Rightarrow |x-2| \geq 3 \Rightarrow \begin{cases} x-2 \geq 3 \Rightarrow x \geq 5 \\ x-2 \leq -3 \Rightarrow x \leq -1 \end{cases} \Rightarrow D_f = (-\infty, -1] \cup [5, +\infty)$$

$$\text{ب) } \Rightarrow 4 - |2-x| \geq 0 \Rightarrow |2-x| \leq 4 \Rightarrow -4 \leq 2-x \leq 4 \Rightarrow -4 \leq -x \leq 2 \Rightarrow -2 \leq x \leq 4 \Rightarrow D_f = [-2, 4]$$

$$\text{الف) } \begin{cases} \text{if } x \geq 0 \rightarrow 1 - x^2 \geq 0 \rightarrow x^2 \leq 1 \rightarrow -1 \leq x \leq 1 \\ \text{if } x < 0 \rightarrow 1 + x^2 \geq 0 \rightarrow \text{همواره برقرار} \end{cases} \Rightarrow D_f = (-\infty, 1]$$

$$\text{ب) } \Rightarrow \begin{cases} \sqrt{3-|x-5|} \neq 1 \rightarrow 3-|x-5| \neq 1 \rightarrow -|x-5| \neq -4 \rightarrow |x-5| \neq 4 \Rightarrow x \neq 9, 1 \\ 3-|x-5| \geq 0 \rightarrow |x-5| \leq 3 \rightarrow -3 \leq x-5 \leq 3 \rightarrow 2 \leq x \leq 8 \end{cases} \Rightarrow D_f = [2, 8] - \{1, 9\}$$

$$\text{الف) } \Rightarrow \cos x \neq 0 \Rightarrow \begin{matrix} \circ & \times & \circ & \times & \circ \\ | & & | & & | \\ - & & + & & - \end{matrix} \Rightarrow D_f = \mathbb{R} - \left\{k\pi + \frac{\pi}{2}\right\}$$

$$\text{ب) } \Rightarrow 2\cos x - 1 \neq 0 \rightarrow 2\cos x \neq 1 \rightarrow \cos x \neq \frac{1}{2} \Rightarrow \begin{matrix} \times & \times & \times & \times & \times \\ | & & | & & | \\ - & & + & & - \end{matrix} \Rightarrow \mathbb{R} - \left\{2k\pi \pm \frac{\pi}{3}\right\} = D_f$$

$$\text{الف) } \Rightarrow |2x+1| - |x+3| \neq 0 \Rightarrow |2x+1| \neq |x+3| \Rightarrow \begin{cases} 2x+1 \neq x+3 \rightarrow x \neq 2 \\ 2x+1 \neq -(x+3) \rightarrow 3x \neq -4 \rightarrow x \neq -\frac{4}{3} \end{cases} \Rightarrow \mathbb{R} - \left\{2, -\frac{4}{3}\right\} = D_f$$

$$\text{ب) } \Rightarrow |2x+1| - |x+3| \geq 0 \Rightarrow |2x+1| \geq |x+3| \Rightarrow \begin{cases} 2x+1 \geq x+3 \rightarrow x \geq 2 \\ 2x+1 \leq -(x+3) \rightarrow 3x \leq -4 \rightarrow x \leq -\frac{4}{3} \end{cases} \Rightarrow D_f = (-\infty, -\frac{4}{3}] \cup [2, +\infty)$$

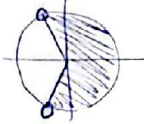
$$\rightarrow \log_{\omega} \log_{\omega} x-1 \geq 0 \xrightarrow{\text{جستجو}} \log_{\omega} x-1 \leq 1 \rightarrow x-1 \leq \omega \rightarrow x \leq \omega$$

* این مسائل به واقع در دوره ۱

$$\xrightarrow{n} D_{f^s}(1, \omega]$$

$$\rightarrow \log_{\omega} x-1 > 0 \rightarrow x-1 > 1 \rightarrow x > 2 \rightarrow x > 1$$

$$\rightarrow x-1 > 0 \rightarrow x > 1$$

الف) $\rightarrow \cos x + 1 > 0 \rightarrow \cos x > -1 \rightarrow$  $\rightarrow D_f = (x - \frac{\pi}{2}, x + \frac{\pi}{2})$

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ب) $\rightarrow \frac{x-1}{x+1} \geq 0 \rightarrow \frac{x-1}{x+1} \geq 1 \rightarrow \frac{x-1-(x+1)}{x+1} \geq 0 \rightarrow \frac{-2}{x+1} \geq 0 \rightarrow x+1 < 0 \rightarrow x < -1 \rightarrow (-\infty, -1)$

$\frac{x-1}{x+1} > 0 \rightarrow \frac{-1}{x+1} > 0 \rightarrow (-\infty, -1) \cup [1, +\infty)$

$$\left. \begin{array}{l} \text{ } \\ \text{ } \end{array} \right\} \xrightarrow{n} D_{f^s}(-\infty, -1)$$