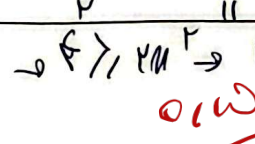
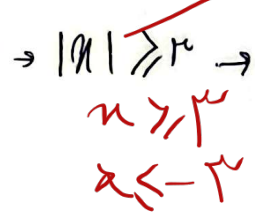


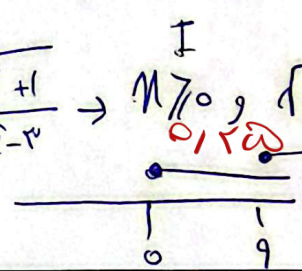
۱۴/۲۵

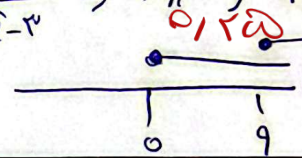
۱) $\sqrt{4-x} \geq \sqrt{x-2} \rightarrow x-2 \geq 0 \rightarrow x \geq 2$ و $4-x \geq x-2 \rightarrow 4 \geq 2x-2 \rightarrow 6 \geq 2x \rightarrow 3 \geq x$
 $D_f = [2, 3]$

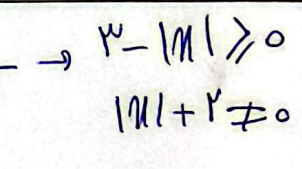

۲) $y = \sqrt{3-x} \geq \sqrt{x-2} \rightarrow x-2 \geq 0 \rightarrow x \geq 2$, $3-x \geq x-2 \rightarrow 3 \geq 2x-2 \rightarrow 5 \geq 2x \rightarrow 2.5 \geq x$
 $D_f = [2, 2.5]$

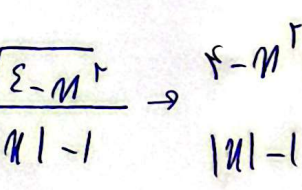

۳) $\sqrt{4-2x^2} \geq \sqrt{4-x^2} \rightarrow 4-2x^2 \geq 0 \rightarrow 4 \geq 2x^2 \rightarrow 2 \geq x^2 \rightarrow \sqrt{2} \geq x \geq -\sqrt{2}$
 $D_f = [-\sqrt{2}, \sqrt{2}]$


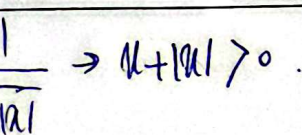
۴) $\sqrt{3|x|-9} \geq \sqrt{|x|-3} \rightarrow 3|x|-9 \geq 0 \rightarrow |x| \geq 3 \rightarrow x \geq 3$ or $x \leq -3$
 $D_f = [3, \infty) \cup (-\infty, -3]$


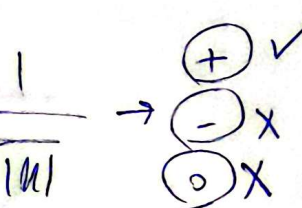
۵) $\sqrt{\frac{|x|+1}{|x|-3}} \geq \sqrt{\frac{|x|-3}{|x|+1}} \rightarrow |x|-3 \neq 0 \rightarrow |x| \neq 3 \rightarrow x \neq \pm 3 \rightarrow D_f = \mathbb{R} - \{\pm 3\}$


۶) $\sqrt{\frac{\sqrt{x}+1}{\sqrt{x}-3}} \geq \sqrt{\frac{\sqrt{x}-3}{\sqrt{x}+1}} \rightarrow \sqrt{x} \geq 0$ and $\sqrt{x}-3 \geq 0 \rightarrow \sqrt{x} \geq 3 \rightarrow x \geq 9$
 $D_f = [9, \infty)$


۷) $\frac{\sqrt{3-|x|}}{|x|+2} \geq \frac{\sqrt{|x|-3}}{|x|+2} \rightarrow 3-|x| \geq 0 \rightarrow 3 \geq |x| \rightarrow -3 \leq x \leq 3$
 $|x|+2 \neq 0 \rightarrow |x| \neq -2$
 $D_f = [-3, 3]$


۸) $\sqrt{4-x^2} \geq \sqrt{x^2-1} \rightarrow 4-x^2 \geq 0 \rightarrow 4 \geq x^2 \rightarrow -2 \leq x \leq 2$
 $|x^2-1| \neq 0 \rightarrow |x| \neq 1 \rightarrow x \neq \pm 1$
 $D_f = [-2, -1) \cup (-1, 1) \cup (1, 2]$


۹) $\frac{x+1}{\sqrt{x}+\sqrt{x+1}} \geq 0 \rightarrow x+1 \geq 0 \rightarrow x \geq -1$
 $D_f = [-1, \infty)$


۱۰) $\frac{1}{\sqrt{x|x|}} \geq 0 \rightarrow x \geq 0$
 $D_f = [0, \infty)$


الف) $y = \sqrt{2 - [n]} \rightarrow 2 - [n] \geq 0 \rightarrow 2 \geq [n] \rightarrow \cancel{D_f = \{n \in \mathbb{Z} \mid n \leq 2\}} \rightarrow D_f = (-\infty, 2]$

ب) $y = \frac{1}{\sqrt{2 - [n]}} \rightarrow 2 - [n] > 0 \rightarrow 2 > [n] \rightarrow D_f = (-\infty, 2)$

الف) $y = \frac{1}{n[n]}$ $\rightarrow n[n] \neq 0 \xrightarrow{\text{مستقيم } n \text{ و } M \text{ اعداد}} D_f = \mathbb{R} - \{0\}$

ب) $y = \frac{1}{\sqrt{-n[n]}}$ $\rightarrow -n[n] > 0 \rightarrow n[n] < 0 \rightarrow D_f = \emptyset$

الف) $y = \sqrt{[n - \frac{1}{n}] + [n + \frac{1}{n}]} \rightarrow [n - \frac{1}{n}] + [n + \frac{1}{n}] \geq 0 \rightarrow [n + \frac{1}{n} - 1] + [n + \frac{1}{n}] \rightarrow [n + \frac{1}{n}] - 1 + [n + \frac{1}{n}] \geq 0 \rightarrow [n + \frac{1}{n}] \geq 1 \rightarrow [n + \frac{1}{n}] \geq \frac{1}{2} \rightarrow D_f = [\frac{1}{2}, +\infty)$

ب) $y = \sqrt{[n - \frac{1}{n}] + [-n + \frac{1}{n}]} \rightarrow a \in \mathbb{Z} \quad [a] + [-a] = 0 \rightarrow n - \frac{1}{n} \in \mathbb{Z}$
 $a \notin \mathbb{Z} \quad [a] + [-a] = -1 \rightarrow D_f = \{n \mid n = k + \frac{1}{n}, k \in \mathbb{Z}\}$

الف) $y = \frac{1}{r \sin^2 m - 1} \rightarrow r \sin^2 m - 1 \neq 0 \rightarrow r \sin^2 m \neq 1 \rightarrow \sin^2 m \neq \frac{1}{r} \rightarrow \sin m \neq \pm \frac{1}{\sqrt{r}}$
 $\rightarrow \sin m \neq \pm \frac{1}{\sqrt{r}} \rightarrow D_f = \{m \in \mathbb{R} \mid m \neq \frac{\pi}{2} + k\frac{\pi}{r}, k \in \mathbb{Z}\}$

ب) $y = \frac{\cos m + 1}{\tan m + 1} \rightarrow \left. \begin{array}{l} \tan m + 1 \neq 0 \\ \sin(m) \neq 0 \\ \cos(m) \neq 0 \end{array} \right\} \rightarrow D_f = \{m \in \mathbb{R} \mid m \neq \frac{k\pi}{r}, m \neq \frac{r\pi}{2} + k\pi, k \in \mathbb{Z}\}$

الف) $y = \sqrt{r \sin m - 1} \rightarrow r \sin m - 1 \geq 0 \rightarrow r \sin m \geq 1 \rightarrow \sin m \geq \frac{1}{r}$
 $D_f = [\frac{\pi}{r} + 2k\pi, \frac{5\pi}{r} + 2k\pi]$

ب) $y = \sqrt{1 - r \cos m} \rightarrow 1 - r \cos m \geq 0 \rightarrow 1 \geq r \cos m \rightarrow \frac{1}{r} \geq \cos m$
 $D_f = [\frac{\pi}{r} + 2k\pi, \frac{5\pi}{r} + 2k\pi]$