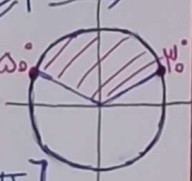
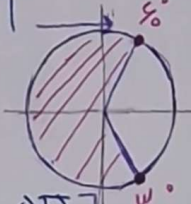


<p>الف $y = \sqrt{4 - \sqrt{2-x}}$</p> $\begin{cases} 2-x \geq 0 \rightarrow x \leq 2 \\ 4 - \sqrt{2-x} \geq 0 \rightarrow \sqrt{2-x} \leq 4 \rightarrow 2-x \leq 16 \rightarrow x \geq -14 \end{cases}$ $x \leq 2 \cap x \geq -14$ $D_f = [-14, 2]$	<p>ب $y = \sqrt{3 - \sqrt{x-2}}$</p> $\begin{cases} x-2 \geq 0 \rightarrow x \geq 2 \\ 3 - \sqrt{x-2} \geq 0 \rightarrow \sqrt{x-2} \leq 3 \rightarrow x-2 \leq 9 \rightarrow x \leq 11 \end{cases}$ $x \geq 2 \cap x \leq 11$ $D_f = [2, 11]$	<p>۱</p>
<p>الف $y = \sqrt{4 - 2x^2}$</p> $4 - 2x^2 \geq 0 \rightarrow 2x^2 \leq 4 \rightarrow x^2 \leq 2 \rightarrow -\sqrt{2} \leq x \leq \sqrt{2}$ $D_f = [-\sqrt{2}, \sqrt{2}]$	<p>ب $y = \sqrt{3 x -9}$</p> $3 x -9 \geq 0 \rightarrow 3 x \geq 9 \rightarrow x \geq 3 \rightarrow \begin{cases} x \geq 3 \\ x \leq -3 \end{cases}$ $D_f = (-\infty, -3] \cup [3, +\infty)$	<p>۲</p>
<p>الف $y = \sqrt[3]{\frac{ x +1}{ x -3}}$</p> $ x -3 \neq 0 \rightarrow x \neq 3 \rightarrow x \neq \pm 3$ $D_f = \mathbb{R} - \{\pm 3\}$	<p>ب $y = \sqrt[3]{\frac{\sqrt{x+1}}{\sqrt{x-3}}}$</p> $\begin{cases} x \geq 0 \\ \sqrt{x-3} \neq 0 \rightarrow \sqrt{x} \neq 3 \rightarrow x \neq 9 \end{cases}$ $x \geq 0 \cap x \neq 9$ $D_f = [0, +\infty) - \{9\}$	<p>۳</p>
<p>الف $y = \frac{\sqrt{3- x }}{ x +2}$</p> $\begin{cases} 3- x \geq 0 \rightarrow x \leq 3 \rightarrow -3 \leq x \leq 3 \\ x +2 \neq 0 \rightarrow x \neq -2 \end{cases}$ <p>شرط دوم همواره برقرار است بنابراین</p> $D_f = [-3, 3]$	<p>ب $y = \frac{\sqrt{4-x^2}}{ x -1}$</p> $\begin{cases} 4-x^2 \geq 0 \rightarrow x^2 \leq 4 \rightarrow -2 \leq x \leq 2 \\ x -1 \neq 0 \rightarrow x \neq 1 \rightarrow x \neq \pm 1 \end{cases}$ $-2 \leq x \leq 2 \cap x \neq \pm 1$ $D_f = [-2, 2] - \{\pm 1\}$	<p>۴</p>
<p>الف $y = \frac{x+1}{\sqrt{x+ x }}$</p> $x+ x > 0 \rightarrow x > -x$ $D_f = \mathbb{R}^+$	<p>ب $y = \frac{1}{\sqrt{x x }}$</p> $x x > 0$ $D_f = \mathbb{R}^+$	<p>۵</p>

<p>الف $y = \sqrt{p - [x]}$</p> <p>$p - [x] \geq 0 \rightarrow [x] \leq p \rightarrow x < p$</p> <p>$D_f = (-\infty, p)$</p>	<p>ب $y = \frac{1}{\sqrt{p - [x]}}$</p> <p>$p - [x] > 0 \rightarrow [x] < p \rightarrow x < p$</p> <p>$D_f = (-\infty, p)$</p>	<p>٦</p>
<p>الف $y = \frac{1}{x[x]}$</p> <p>$x[x] \neq 0$</p> <p>حالت هاجي که این عبارت برابر با ۰ می شه.</p> <p>$x = 0$ $[x] = 0 \rightarrow 0 \leq x < 1$</p> <p>$D_f = \mathbb{R} - [0, 1)$</p>	<p>ب $y = \frac{1}{\sqrt{-x[x]}}$</p> <p>$-x[x] > 0$ $x[x] < 0$</p> <p>$D_f = \emptyset$</p>	<p>٧</p>
<p>الف $y = \sqrt{[x - \frac{1}{p}] + [x + \frac{p}{p}]}$</p> <p>$[x + \frac{p}{p} - 1] + [x + \frac{p}{p}] \geq 0 \rightarrow [x + \frac{p}{p}] + [x + \frac{p}{p}] \geq 1$</p> <p>$2[x + \frac{p}{p}] \geq 1 \rightarrow [x + \frac{p}{p}] \geq \frac{1}{2} \rightarrow x \geq \frac{1}{2}$</p> <p>$D_f = [\frac{1}{2}, +\infty)$</p>	<p>ب $y = \sqrt{[x - \frac{1}{p}] + [-x + \frac{1}{p}]}$</p> <p>$[x - \frac{1}{p}] + [-x + \frac{1}{p}] \geq 0$</p> <p>$\begin{cases} a \in \mathbb{Z} & [a] + [-a] = 0 \\ a \notin \mathbb{Z} & [a] + [-a] = -1 \end{cases} \rightarrow \begin{cases} x - \frac{1}{p} \in \mathbb{Z} \\ x \in \mathbb{Z} + \frac{1}{p} \end{cases}$</p> <p>$D_f = \{x \mid x = k + \frac{1}{p}, k \in \mathbb{Z}\}$</p>	<p>٨</p>
<p>الف $y = \frac{1}{p \sin^2 x - 1}$</p> <p>$p \sin^2 x - 1 \neq 0 \rightarrow p \sin^2 x \neq 1 \rightarrow \sin^2 x \neq \frac{1}{p}$</p> <p>$\sin x \neq \pm \frac{1}{\sqrt{p}} \rightarrow \sin x \neq \pm \frac{\sqrt{p}}{p} \rightarrow x \neq k\pi + \frac{\pi}{6}, k\pi + \frac{5\pi}{6}$</p> <p>$D_f = \mathbb{R} - \{k\pi + \frac{\pi}{6}, k\pi + \frac{5\pi}{6}\}$</p>	<p>ب $y = \frac{\cot x + 1}{\tan x + 1} = \frac{\frac{\cos x}{\sin x} + 1}{\frac{\sin x}{\cos x} + 1}$</p> <p>$\begin{cases} \sin x \neq 0 \rightarrow x \neq k\pi \\ \cos x \neq 0 \rightarrow x \neq k\pi + \frac{\pi}{2} \\ \tan x + 1 \neq 0 \rightarrow \tan x \neq -1 \rightarrow x \neq k\pi + \frac{3\pi}{4} \end{cases}$</p> <p>$D_f = \mathbb{R} - \{k\pi + \frac{\pi}{4}, k\pi + \frac{5\pi}{4}\}$</p>	<p>٩</p>
<p>الف $y = \sqrt{p \sin x - 1}$</p> <p>$p \sin x - 1 \geq 0 \rightarrow p \sin x \geq 1 \rightarrow \sin x \geq \frac{1}{p}$</p> <p>$D_f = [k\pi + \frac{\pi}{6}, k\pi + \frac{5\pi}{6}]$</p> 	<p>ب $y = \sqrt{1 - p \cos x}$</p> <p>$1 - p \cos x \geq 0 \rightarrow p \cos x \leq 1 \rightarrow \cos x \leq \frac{1}{p}$</p> <p>$D_f = [k\pi + \frac{\pi}{3}, k\pi + \frac{2\pi}{3}]$</p> 	<p>١٠</p>