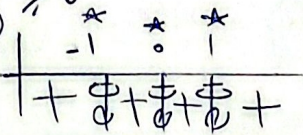
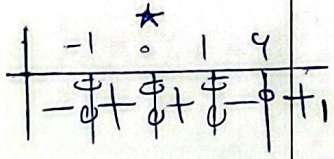
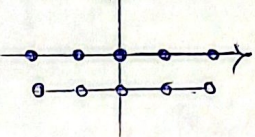
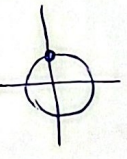
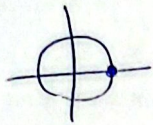
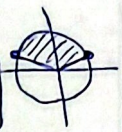
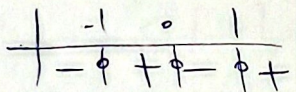


(ب) $y = \sqrt{\frac{x^6 - x^3}{x^3 - x}}$ $\frac{x^3(x+1)(x-1)}{x(x+1)(x-1)} \geq 0$  $D_f = \mathbb{R} - \{-1, 0, 1\}$	(الف) $y = \sqrt{\frac{x^2 - 4x}{x^3 - x}}$ $\frac{x(x-4)}{x(x+1)(x-1)} \geq 0$  $D_f = (-1, 1) - \{0\} \cup [4, +\infty)$
(ب) $y = \frac{1}{\sqrt{x x }}$ $x x > 0 \rightarrow \begin{matrix} \nearrow + \checkmark \\ \rightarrow 0 \times \\ \searrow - \times \end{matrix}$ $D_f = \mathbb{R}^+$	(الف) $y = \frac{x+1}{\sqrt{x+1 x }}$ $x+1 x > 0 \rightarrow x > -x$ $D_f = \mathbb{R}^+$
(ب) $y = \frac{1}{\sqrt{2-[x]}}$ $2-[x] > 0 \rightarrow [x] < 2 \Rightarrow x < 2$ $D_f = (-\infty, 2)$	(الف) $y = \sqrt{2-[x]}$ $2-[x] \geq 0 \Rightarrow [x] \leq 2 \rightarrow x < 3$ $D_f = (-\infty, 3)$
(ب) $y = \sqrt{\left[x - \frac{1}{3}\right] + \left[-x + \frac{1}{3}\right]}$  $y = [x] + [-x] \leq 0$ $\Rightarrow x - \frac{1}{3} \in \mathbb{Z}$ $D_f = \left\{x \mid x = k + \frac{1}{3}, k \in \mathbb{Z}\right\}$	(الف) $y = \sqrt{\left[x - \frac{1}{3}\right] + \left[x + \frac{2}{3}\right]}$ $\left[x + \frac{2}{3} - 1\right] + \left[x + \frac{2}{3}\right] \geq 0$ $\rightarrow 2\left[x + \frac{2}{3}\right] \geq 1 \Rightarrow x + \frac{2}{3} \geq 1$ $\Rightarrow x \geq \frac{1}{3}$ $D_f = \left[\frac{1}{3}, +\infty\right)$
(ب) $y = \frac{r}{r \sin^2 \alpha - 1}$  $r \sin^2 \alpha - 1 \neq 0 \rightarrow \sin \alpha \neq \pm \frac{\sqrt{2}}{2}$ $D_f = \mathbb{R} - \left\{\frac{k\pi}{4} + \frac{\pi}{4}\right\}$	(الف) $y = \frac{r}{\sin \alpha - 1}$  $\rightarrow \sin \alpha \neq 1$ $D_f = \mathbb{R} - \left\{2k\pi + \frac{\pi}{2}\right\}$

$y = \sqrt{\cos x - 1} \quad (ب)$ $\cos x - 1 \geq 0 \rightarrow \cos x \geq 1$ $D_f = \{2K\pi\}$ 	$y = \sqrt{2\sin x - 1} \quad (الف)$ $2\sin x - 1 \geq 0 \rightarrow \sin x \geq \frac{1}{2}$ $D_f = \left[2K\pi + \frac{\pi}{6}, 2K\pi + \frac{5\pi}{6}\right]$ 
$y = \arcsin(x^2 + 3x + 1) \quad (ب)$ $-1 \leq x^2 + 3x + 1 \leq 1$ $\begin{cases} x^2 + 3x + 1 \geq -1 \Rightarrow (x+1)(x+2) \geq 0 \\ x^2 + 3x + 1 \leq 1 \Rightarrow x(x+3) \leq 0 \end{cases}$ (حل جداول علامت) $D_f = [-3, -2] \cup [-1, 0]$	$\cos y = x - 3 \quad (الف)$ $-1 \leq x - 3 \leq 1 \rightarrow 2 \leq x \leq 4$ $\rightarrow x \geq 2 \text{ و } x \leq -2$ $\rightarrow -4 \leq x \leq -2$ $D_f = [-4, -2] \cup [2, 4]$
$y = \log(x^3 - x) \quad (ب)$ $x^3 - x > 0 \rightarrow x(x+1)(x-1) > 0$  $D_f = (-1, 0) \cup (1, +\infty)$	$y = \sqrt{2 - \log_p(x-2)} \quad (الف)$ $x-2 > 0 \rightarrow x > 2$ $2 - \log_p(x-2) \geq 0 \rightarrow \log_p(x-2) \leq 2$ $\Rightarrow x \leq 11$ $D_f = (2, 11]$
$y = \frac{3}{x^2 - 1} \quad (ب)$ $x^2 \neq 1 \rightarrow D_f = \mathbb{R} - \{0\}$	$y = \frac{3}{x^2 + 1} \quad (الف)$ $x^2 \neq -1 \rightarrow D_f = \mathbb{R}$
$y = \frac{3}{x^2 - 3} \quad (ب)$ $x^2 \neq 3 \rightarrow D_f = \mathbb{R} - \{\log_3 3\}$	$y = \frac{3}{x^2 - 2} \quad (ج)$ $x^2 \neq 2 \rightarrow 2^{2x} \neq 2 \Rightarrow D_f = \mathbb{R} - \{\frac{1}{2}\}$
$y = \left(\frac{3x-2}{2x-5}\right)! \quad (ب)$ $\frac{3x-2}{2x-5} \in \mathbb{W} \rightarrow 3x-2 = 2x-5 \Rightarrow x = \frac{2-5}{3-2} = -3$ $D_f = \left\{x \mid x = \frac{2-5K}{3-2K}, K \in \mathbb{W}\right\}$	$y = (x+1)! \quad (الف)$ $x+1 \in \mathbb{W} \rightarrow x \in \frac{\mathbb{W}-1}{1}$ $D_f = \left\{x \mid x = \frac{K-1}{1}, K \in \mathbb{W}\right\}$