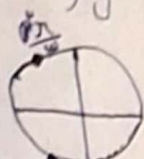
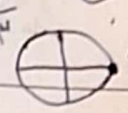


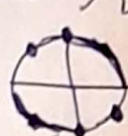
الف) $y = \frac{\sin x - 1}{\cos x + 1} \Rightarrow \cos x \neq -1 \Rightarrow \cos x \neq -1$
 $\Rightarrow \cos x + 1 \neq 0 \Rightarrow D = \mathbb{R} - \left\{ k\pi + \frac{\pi}{3}, k\pi + \frac{2\pi}{3} \right\}$



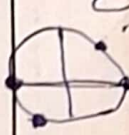
ب) $y = \frac{\sin x + 1}{\cos x - 1} \Rightarrow \cos x - 1 \neq 0 \Rightarrow \cos x \neq 1$
 $D = \mathbb{R} - \{ k\pi \}$



الف) $y = \frac{\sin x + 1}{\tan x + 1} \Rightarrow \tan x + 1 \neq 0, \tan \rightarrow \text{تعریف شده}$
 $D = \mathbb{R} - \left\{ k\pi + \frac{\pi}{4}, k\pi + \frac{5\pi}{4} \right\} \Rightarrow \tan x \neq -1 \Rightarrow x \neq \left\{ k\pi + \frac{3\pi}{4}, k\pi + \frac{7\pi}{4} \right\}$



ب) $y = \frac{\cos x + 1}{\cot x - 1} \Rightarrow \cot x - 1 \neq 0, \cot x \rightarrow \text{تعریف شده}$
 $D = \mathbb{R} - \left\{ k\pi, k\pi + \frac{\pi}{4} \right\} \Rightarrow \cot x \neq 1 \Rightarrow x \neq \left\{ k\pi + \frac{\pi}{4}, k\pi + \frac{5\pi}{4} \right\}$



الف) $\sin y = n^2 - 1 \Rightarrow -1 \leq n^2 - 1 \leq 1 \Rightarrow n^2 \leq 2 \Rightarrow n \in [-\sqrt{2}, \sqrt{2}]$
 $D = [-\sqrt{2}, \sqrt{2}] \cap ([1, \infty) \cup (-\infty, -1]) = [-\sqrt{2}, -1] \cup [1, \sqrt{2}]$

ب) $y = \arccos(\sqrt{n-3}) \Rightarrow -\sqrt{2} \leq \sqrt{n-3} \leq \sqrt{2} \Rightarrow -2 \leq n-3 \leq 2 \Rightarrow 1 \leq n \leq 5$
 $D = [1, 5]$

الف) $\cos y = |n| - 3 \Rightarrow -1 \leq |n| - 3 \leq 1 \Rightarrow 2 \leq |n| \leq 4 \Rightarrow n \in [-4, -2] \cup [2, 4]$
 $D = [-4, -2] \cup [2, 4]$

ب) $y = \arcsin(n^2 + 3n + 1) \Rightarrow -1 \leq n^2 + 3n + 1 \leq 1 \Rightarrow -2 \leq n^2 + 3n \leq 0$
 $D = [-2, 0]$

الف) $y = \log_{n-1} n \Rightarrow n-1 > 0, n-1 \neq 1 \Rightarrow n > 1, n \neq 2$
 $D = (1, \infty) \cap (-\infty, 2) - \{2\} = (1, 2)$

ب) $y = \log_{n+1} n \Rightarrow n+1 > 0, n+1 \neq 1 \Rightarrow n > -1, n \neq 0$
 $D = (-1, \infty) \cap (-\infty, 0) - \{0\} = (-1, 0)$

$D = (-\infty, -1) \cap (-\infty, -1) \cup (1, \infty) - \{-1\} = (-\infty, -1) \cup (1, \infty) - \{-1\}$

بعضیید من ~~الاستی~~ استیاهی جواب سوال ۵/۱ جای ۴ و جواب ۶/۱

الف $\Rightarrow n^N - N > 0 \Rightarrow n^N > N \Rightarrow n > N$ یا $n < -N$

$$D = (N, +\infty) \cup (-\infty, -N)$$

ب $\Rightarrow N - |n| > 0 \Rightarrow N > |n| \Rightarrow -N < n < N$

$$D = (-N, N)$$

$$n^N - (n+N) = (n-N)(n-1)$$

الف) $\log_p (n^p - p) \Rightarrow n^p - p > 0 \Rightarrow n^p > p \Rightarrow n > \sqrt[p]{p} \Rightarrow n < \sqrt[p]{p}$
 $D = (p, +\infty) \cup (-\infty, -p)$

ب) $\log_p (p - |n|) \Rightarrow p - |n| > 0 \Rightarrow p > |n| \Rightarrow -p < n < p$
 $D = (-p, p)$

الف) $y = \log \frac{n^p - (n+p) - (n-p)(n-1)}{n-p} \Rightarrow \frac{n^p - (n+p) - (n-p)(n-1)}{n-p} > 0$
 $D = (1, p) \cup (p, +\infty)$

ب) $y = \log \frac{n+p}{n-p} > 0, n+p > 0, n+p \neq 1, n > -p, n \neq -p$
 $D = (-\infty, -p) \cup (p, +\infty)$

الف) $y = \sqrt[p]{p - \log_p (n-p)} \Rightarrow n-p > 0 \Rightarrow n > p, p - \log_p (n-p) > 0$

$D = (p, 10]$ $n \leq 10 \Leftrightarrow n-p \leq p^p \Leftrightarrow p > \log_p (n-p)$
 $D = (p, +\infty) \cap (-\infty, 10]$

ب) $\log(p \log_p^n - 1) \Rightarrow n > 0, p \log_p^n - 1 > 0 \Rightarrow p \log_p^n > 1$
 $D = (\sqrt[p]{p}, +\infty) \cap (0, \infty) \cap (\sqrt[p]{p}, \infty)$

الف) $y = \frac{p}{p^n + 1} \Rightarrow p^n + 1 \neq 0 \Rightarrow p^n \neq -1 \rightarrow$ بازای R مقبول است $D = R$

ب) $y = \frac{p}{p^n - 1} \Rightarrow p^n - 1 \neq 0 \Rightarrow p^n \neq 1 \Rightarrow n \neq 0$ $D = R - \{0\}$

2. $\frac{p}{p^n - p} \Rightarrow p^n - p \neq 0 \Rightarrow p^n \neq p \Rightarrow n \neq 1$ $D = R - \{1\}$
 $\frac{p}{p^n - p} \Rightarrow p^n - p \neq 0 \Rightarrow p^n \neq p \Rightarrow n \neq \log_p p \Rightarrow D = R - \{\log_p p\}$

الف) $(p(n+1))! \Rightarrow (n+1) \in W \Rightarrow n \in \frac{W-1}{p} \Rightarrow D = \{n | n = \frac{k-1}{p}, k \in W\}$

ب) $y = \left(\frac{p(n-p)}{p(n-a)} \right)!$ $\frac{p(n-p)}{p(n-a)} \in W \Rightarrow p(n-p) = p(n-a) \Rightarrow$
 $p(n-p)W(n) = -aW + p$

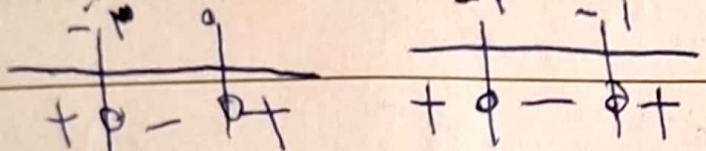
$D = \{n | n = \frac{-aW + p}{p - pW}, k \in W\}$ $\Rightarrow p(n-p)W(n) = -aW + p$
 $\Rightarrow n = \frac{-aW + p}{p - pW}$

$$D = [-1, -1] \cup [1, 1]$$

$$D = [-1, -1] \cup [1, 1]$$

$$y = \arcsin(n^N + 1/n + 1)$$

$$-1 \leq n^N + 1/n + 1 \leq 1$$



$$n^N + 1/n + 1 \leq 1 \Rightarrow n^N + 1/n \leq 0 \Rightarrow n^N \leq -1/n$$

$$D = [-1, -1] \cup [1, 1]$$

$$[-1, \infty) \cup (\infty, 1]$$

$$[-1, 0]$$

$$y = \log_{n-1}^{a-n}$$

$$\Rightarrow a-n > 0$$

$$n-1 > 0, n-1 \neq 1 \Rightarrow a > n, n > 1, n \neq 1$$

$$D = (1, \infty) \cap (-\infty, a) - \{1\} = (-\infty, a) - \{1\}$$

$$D = (1, a) - \{1\}$$

✓

$$y = \log_{n+1}^{n^N - 1}$$

$$n^N - 1 > 0$$

$$n+1 \neq 1, n+1 > 0 \Rightarrow n \neq -1, n > -1$$

$$1 < n - 1 > n$$

$$D = (-1, \infty) \cap (-\infty, -1) \cup (1, +\infty) - \{-1\} = (-1, -1) \cup (1, +\infty) - \{-1\}$$