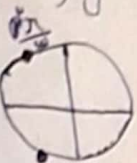


الف) $y = \frac{\sin x - 1}{\cos x + 1} \Rightarrow \cos x \neq -1 \Rightarrow \cos x \neq -1$
 $\Rightarrow \cos x + 1 \neq 0 \Rightarrow D = \mathbb{R} - \left\{ k\pi + \frac{\pi}{3}, k\pi + \frac{2\pi}{3} \right\}$



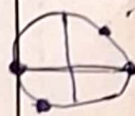
ب) $y = \frac{\sin x + 1}{\cos x - 1} \Rightarrow \cos x - 1 \neq 0 \Rightarrow \cos x \neq 1$
 $D = \mathbb{R} - \{ k\pi \}$



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) $y = \frac{\cos x + 1}{\cot x - 1} \Rightarrow \cot x - 1 \neq 0, \cot x \rightarrow \text{تعریف شده}$
 $D = \mathbb{R} - \left\{ k\pi, k\pi + \frac{\pi}{2} \right\} \Rightarrow \cot x \neq 1 \Rightarrow x \neq \left\{ k\pi + \frac{\pi}{4}, k\pi + \frac{5\pi}{4} \right\}$



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

ب) $y = \arccos(\sqrt{n-3}) \Rightarrow -\sqrt{2} \leq \sqrt{n-3} \leq \sqrt{2}$
 $-1 \leq \sqrt{n-3} \leq 1 \Rightarrow 0 \leq n-3 \leq 4 \Rightarrow 3 \leq n \leq 7$

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

ب) $y = \arcsin(n^2 + 3n + 1) \Rightarrow -1 \leq n^2 + 3n + 1 \leq 1$
 $D = [-4, -2] \cup [2, 4]$

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

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

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

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

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

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

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

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

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

الف $\Rightarrow n^N - N > 0 \Rightarrow n^N > N \Rightarrow n > N$ یا $n < -N$
 $\Rightarrow \log \frac{n^N - N}{N}$

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

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) $y = \log \frac{n^p - (n+p) - (n-p)(n-1)}{n-p} \Rightarrow \frac{n^p - 1 - 2n + p}{n-p} > 0$
 $D = (1, p) \cup (p, +\infty)$ ✓

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) $y = \sqrt[p]{p - \log_p (n-p)} \Rightarrow n-p > 0 \Rightarrow n > p, p - \log_p (n-p) > 0$
 $D = (p, 1]$ ✓

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

الف) $y = \frac{p}{p^n + 1} \Rightarrow p^n + 1 \neq 0 \Rightarrow p^n \neq -1 \Rightarrow n \neq 0$
 $D = \mathbb{R}$
 ب) $y = \frac{p}{p^n - 1} \Rightarrow p^n - 1 \neq 0 \Rightarrow p^n \neq 1 \Rightarrow n \neq 1$
 $D = \mathbb{R} - \{1\}$
 2. $\frac{p}{p^n - p} \Rightarrow p^n - p \neq 0 \Rightarrow p^n \neq p \Rightarrow n \neq 1$
 $D = \mathbb{R} - \{1\}$
 3. $\frac{p}{p^n - p} \Rightarrow p^n - p \neq 0 \Rightarrow p^n \neq p \Rightarrow n \neq 1$
 $D = \mathbb{R} - \{1\}$

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

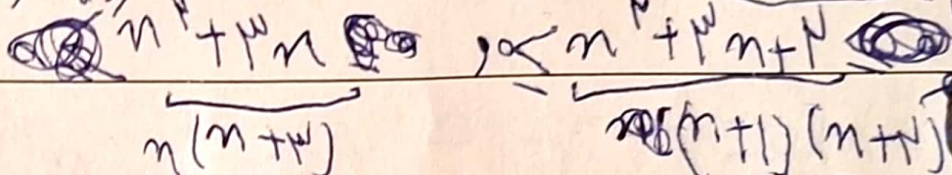
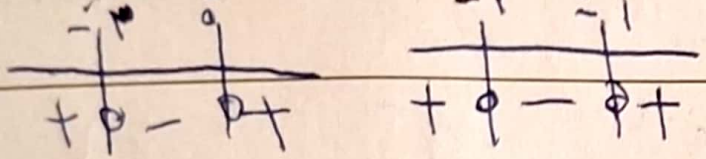
$D = \{n | n = \frac{-ak+p}{p-k}, k \in W\}$
 $\Rightarrow p(n-p) - p(n-a) = -a + p$
 $\Rightarrow n = \frac{-a + p}{p - p}$

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

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

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

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



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

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

$$[-1, 0]$$

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

$$\Rightarrow a-n > 0$$

$$n-1 > 0$$

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

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

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

✓

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

$$n^N - 1 > 0$$

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

$$-1 < n < 1$$

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