

$\frac{n^2 - 4n}{n^3 - n} \geq 0 \rightarrow \frac{n(n-4)}{n(n+1)(n-1)}$ $- \frac{1}{0} + \frac{0}{0} + \frac{1}{0} - \frac{0}{0} + \frac{1}{0}$ $D_f = (-1, 0) \cup (0, 4) \cup [4, +\infty)$	$\frac{n^3 - n^2}{n^3 - n} \geq 0 \rightarrow \frac{n^2(n-1)}{n(n-1)(n+1)}$ $- \frac{1}{0} + \frac{0}{0} + \frac{1}{0} - \frac{0}{0} + \frac{1}{0}$ $D_f = \mathbb{R} - \{-1, 0, 1\}$	۱
$n + n > 0$ $ n > -n \rightarrow \text{فقط برای اعداد مثبت اعداد بزرگتر}$ $D_f = \mathbb{R}^+ = (0, +\infty)$	$n n > 0 \rightarrow \text{فقط برای اعداد مثبت اعداد بزرگتر}$ $D_f = \mathbb{R}^+ = (0, +\infty)$	۲
$2 - [n] \geq 0 \rightarrow [n] \leq 2 \rightarrow$ $n < 3 \Rightarrow D_f = (-\infty, 3)$	$2 - [n] > 0 \rightarrow [n] < 2 \rightarrow$ $n < 2 \Rightarrow D_f = (-\infty, 2)$	۳
$\left[n - \frac{1}{3}\right] + \left[n + \frac{2}{3}\right] \geq 0$ $\left[n - \frac{1}{3}\right] + \left[n - \frac{1}{3}\right] + 1 \geq 0$ $\left[n - \frac{1}{3}\right] \geq -\frac{1}{2} \rightarrow \left[n - \frac{1}{3}\right] \geq 0$ $n - \frac{1}{3} \geq 0 \rightarrow n \geq \frac{1}{3} \rightarrow D_f = \left[\frac{1}{3}, +\infty\right)$	$\left[n - \frac{1}{3}\right] + \left[-\left(n - \frac{1}{3}\right)\right] \geq 0$ $\rightarrow \begin{cases} 0 & n \in \mathbb{Z} \\ -1 & n \notin \mathbb{Z} \end{cases} \Rightarrow D_f = \mathbb{Z}$ $n - \frac{1}{3} \in \mathbb{Z} \rightarrow n \in \mathbb{Z} + \frac{1}{3}$ $\{n n = k + \frac{1}{3}, k \in \mathbb{Z}\}$	۴
$\sin n - 1 \neq 0$ $\sin n \neq 1$ $D_f = \mathbb{R} - \left\{2k\pi + \frac{\pi}{2}\right\}$	$r \sin^n n - 1 \neq 0$ $r \sin^n n \neq 1$ $\sin^n n \neq \frac{1}{r}$ $\sin n \neq \pm \frac{\sqrt[r]{r}}{r}$ $D_f = \mathbb{R} - \left\{\frac{k\pi}{r} + \frac{\pi}{r}\right\}$	۵

$r \sin n - 1 \geq 0$ $\sin n \geq \frac{1}{r}$ $D_f = \left[rKx + \frac{\pi}{4}, rKx + \frac{5\pi}{4} \right]$ (ب) ✓	$\cos n - 1 \geq 0$ $\cos n \geq 1$ $D_f = \{ rKx \}$ (ب) ✓	6
$-1 \leq \cos y \leq 1$ $-1 \leq n - 3 \leq 1$ $2 \leq n \leq 4 \rightarrow \begin{cases} 2 \leq n \leq 4 \\ -4 \leq n \leq -2 \end{cases}$ $D_f = [-4, -2] \cup [2, 4]$ (ب) ✓	$-1 \leq n^r + r_n + 1 \leq 1$ $\textcircled{1} -1 \leq n^r + r_n + 1 \rightarrow 0 \leq n^r + r_n + 1 \rightarrow 0 \leq (n, r)$ $D_1 = (-\infty, -2] \cup [-1, +\infty)$ $\textcircled{2} n^r + r_n + 1 \leq 1 \rightarrow n^r + r_n \leq 0 \rightarrow n(n, r) \leq 0$ $D_2 = [-3, 0]$ $D_f = D_1 \cup D_2 = [-3, -2] \cup [-1, 0]$ (ب) ✓	7
$n - 2 > 0 \rightarrow n > 2$ $r - \log_r(n-2) \geq 0 \Rightarrow \log_r(n-2) \leq r$ $\Rightarrow n - 2 \leq r^r \Rightarrow n \leq 11$ $D_f = (2, 11]$ (ب) ✓	$n^r - n > 0 \Rightarrow n(n^r - 1) > 0 \Rightarrow$ $n(n-1)(n+1) > 0$ $D_f = (-1, 0) \cup (1, +\infty)$ (ب) ✓	8
$r^n > 0$ $\rightarrow r^n + 1 > 1$ (ب) ✓	$r^n - 1 \neq 0$ $\Rightarrow r^n \neq 1 \Rightarrow n \neq 0$ $D_f = \mathbb{R} - \{0\}$ (ب) ✓	9
$r^n > 0$ $\rightarrow r^n + 1 > 1$ (ب) ✓	$r^n - 2 \neq 0$ $\Rightarrow r^n \neq 2 \Rightarrow r^n \neq 2 \Rightarrow n \neq \log_r 2$ $D_f = \mathbb{R} - \{\log_r 2\}$ (ب) ✓	10
$D_f = \left\{ \frac{K-1}{r} \mid K \in \mathbb{N} \cup \{0\} \right\}$ (ب) ✓	$D_f = \left\{ \frac{r - \omega K}{r^r - rK} \mid K \in \{0, 1, 2, 3, \dots\} \right\}$ (ب) ✓	11