

$$y = \sqrt{\frac{n^2 - n^3}{n^3 - n}} \Rightarrow y = \sqrt{\frac{n^2(n+1)(n-1)}{n(n-1)(n+1)}} \quad \text{الف}$$

$$\sqrt{\frac{n^2 - 6n}{n^3 - n}} \Rightarrow \frac{n(n-6)}{n(n-1)(n+1)} > 0$$

$n=1$   
 $n \leq 0$   
 $x=1$

$$\begin{array}{ccc} 1 & 0 & 1 \\ - & + & - \\ + & - & + \end{array} \Rightarrow D_f = R - \{1, 0, -1\}$$

$$\begin{array}{cccc} - & + & - & + \\ + & - & + & - \end{array}$$

$$D_f = (-1, 0) \cup (0, 1) \cup (1, +\infty)$$

$$y = \frac{1}{\sqrt{n|n|}} \Rightarrow n|n| > 0$$

⊖ x  
⊕ ✓  
⊙ x

میگیریم اعداد مثبت و منفی دهم.

$$D_f = (0, +\infty) \subseteq R^+$$

$$y = \sqrt{n + |n|}$$

$$n + |n| > 0 \Rightarrow |n| = -n \begin{cases} n < 0 \\ n > 0 \end{cases}$$

$$n > -n \Rightarrow n > 0 \Rightarrow D_f = (0, +\infty)$$

$$R^+$$

$$y = \frac{1}{\sqrt{2 - [n]}} \Rightarrow 2 - [n] > 0$$

$$2 > [n] \Rightarrow D_f = (2, -\infty)$$

$$y = \sqrt{2 - [n]}$$

$$2 - [n] > 0 \Rightarrow [n] < 2$$

$$D_f = (2, -\infty)$$

$$\sqrt{\left[n - \frac{1}{p}\right] + \left[-\left(n - \frac{1}{p}\right)\right]} \Rightarrow \text{if } a \in \mathbb{Z} \Rightarrow a \notin \mathbb{Z} = -1$$

$$\Rightarrow n - \frac{1}{p} \in \mathbb{Z} \Rightarrow D_f = \{n / n = k + \frac{1}{p}, k \in \mathbb{Z}\}$$

$$n \in \mathbb{Z} + \frac{1}{p}$$

$$y = \sqrt{\left[n - \frac{1}{p}\right] + \left[n + \frac{p}{p}\right]}$$

$$\Rightarrow \left[n + \frac{p}{p}\right] + \left[n + \frac{p}{p}\right] - 1 > 0$$

$$2\left[n + \frac{p}{p}\right] > 1 \Rightarrow \left[n + \frac{p}{p}\right] > \frac{1}{2} \Rightarrow D_f = \left[\frac{1}{p}, +\infty\right)$$

$$r \sin^2 n - 1 \neq 0 \Rightarrow r \sin^2 n \neq 1$$

$$\sin^2 n \neq \frac{1}{r} \Rightarrow \sin n \neq \pm \frac{1}{\sqrt{r}}$$

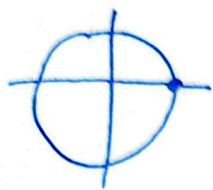
$$\sin n \neq \frac{\pi}{r} + \frac{k\pi}{r}$$

$$D_f = R - \left\{ \frac{\pi}{r} + \frac{k\pi}{r} \right\}$$

$$y = \frac{r}{\sin n - 1} \Rightarrow \sin n - 1 \neq 0 \Rightarrow \sin n \neq 1$$

$$D_f = R - \left\{ 2k\pi + \frac{\pi}{2} \right\}$$

$$\cos n-1 > 0 \Rightarrow \cos n > 1 \quad (ـ)$$



$$D_f = \{r, \pi, \pi/2\}$$

$$y = \sqrt{r \sin n - 1} \quad (الف)$$

$$r \sin n - 1 > 0 \Rightarrow \sin n > \frac{1}{r}$$



$$D_f = \left[ r, \pi + \frac{\pi}{r}, r, \pi + \frac{2\pi}{r} \right]$$

$$y = \arcsin(n^r e^{rn+1})$$

$$-1 \leq n^r e^{rn+1} \leq 1$$

$$n^r e^{rn+1} > 0$$

$$(n+1)(n+r) > 0$$

$$n \in (-r, n) \Rightarrow -1$$

$$n^r e^{rn+1} < 0$$

$$-r < n < 0$$

$$D_f = [r, r] \cup [-1, 0]$$

$$\cos y = |n| - r \quad (الف)$$

$$-1 \leq |n| - r \leq 1$$

$$-r \leq n \leq r$$

$$r \leq |n| \leq r$$

$$D_f = [-r, r] \cup [r, r]$$

$$y = \log_{10} n^r - n \Rightarrow n^r - n > 0$$

$$\Rightarrow n(n-1) > 0 \Rightarrow n < 0 \text{ or } n > 1$$

$$D_f = (-\infty, 0) \cup (1, +\infty)$$

$$r - \log_r(n-r) > 0 \Rightarrow n-r > 0 \Rightarrow n > r$$

$$r \geq \log_r(n-r) \Rightarrow n^r \geq n-r \Rightarrow n \leq 1$$

$$D_f = (r, 11)$$

$$f^n - 1 \neq 0 \Rightarrow f^n \neq 1$$

$$D_f = \mathbb{R} - \{0\}$$

$$\cancel{f^n - 1 \neq 0} \Rightarrow \cancel{f^n \neq 1}$$

$$f^n + 1 \neq 0 \Rightarrow f^n \neq -1 \Rightarrow D_f = \mathbb{R}$$

$$f^n - r \neq 0 \Rightarrow f^n \neq r \Rightarrow n \neq \log_f^r$$

$$D_f = \mathbb{R} - \{\log_f^r\}$$

$$f^n - r \neq 0 \Rightarrow f^n \neq r$$

$$n \neq \log_f^r \Rightarrow D_f = \mathbb{R} - \{\log_f^r\}$$

$$\frac{r^n - r}{r^n - a} = w \Rightarrow r^n - r = r^n(w - aw)$$

$$\Rightarrow r^n - r = r^n(w - aw) \Rightarrow r^n(1-w) = r$$

$$n \in \frac{aw-r}{r-w} \Rightarrow D_f = \left\{ \frac{aw-r}{r-w} \mid n \in \mathbb{W} \right\}$$

$$y = (f^{n+1})! \Rightarrow f^{n+1} \in \mathbb{W}$$

$$f^n \in \mathbb{W} - 1 \Rightarrow n \in \frac{\mathbb{W}-1}{f}$$

$$\Rightarrow D_f = \left\{ \frac{-1}{f} \mid n \in \mathbb{W} \right\}$$