

یک عبارت در بازه $(3, \infty)$ مثبت است پس سهمی مثبت $\Rightarrow a - 2 = 0 \Rightarrow a = 2$

$$\sqrt{4x+b} \quad 4+b=0 \Rightarrow b=-4$$

$$\frac{2}{-\phi+}$$

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$$x^2 - 2x + 1 - m^2 \geq 0 \Rightarrow \Delta \leq 0 \Rightarrow 4 - 4 + 4m^2 \leq 0 \Rightarrow$$

$$m^2 - 2 + 1 \leq 0 \quad m^2 - 1 \leq 0 \quad \frac{-1 \quad +1}{+\phi - \phi +} \quad 1 - (-1) = 2$$

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$$\left. \begin{array}{l} -2 \leq x \leq 2 \\ [x] + [-x] + 1 \neq 0 \Rightarrow x \in \mathbb{Z} \end{array} \right\} \Rightarrow \{-2, -1, 0, 1, 2\}$$

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۵ عدد صحیح

الف) $x(x+3) \geq 0$ $\frac{-3 \quad 0^*}{-\phi + \phi +} \quad D_f = [-3, \infty)$

ب) $\frac{(x^2-1)x^2(x-3)}{x^2-1} \geq 0$

$$\frac{-1 \quad 0^* \quad 1^* \quad 3}{+\phi - \phi - \phi - \phi +} \quad D_f = (-\infty, -1] \cup \{0\} \cup [3, \infty)$$

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الف) $|x-2| - 3 \geq 0 \Rightarrow \begin{cases} x > 2 \rightarrow x-5 \geq 0 \Rightarrow x \geq 5 \\ x \leq 0 \rightarrow -x-1 \geq 0 \Rightarrow x \leq -1 \end{cases}$

$$D_f = (-\infty, -1] \cup [5, \infty)$$

ب) $4 - |2-x| \geq 0 \Rightarrow \begin{cases} x < 2 \rightarrow 2+x \geq 0 \Rightarrow x \geq -2 \\ x > 2 \rightarrow 4-x \geq 0 \Rightarrow x \leq 4 \end{cases} \quad D_f = [-2, 4]$

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$$1 - n|n| \geq 0 \rightarrow n \leq 0 \rightarrow 1 + n \geq 0 \Rightarrow n \geq -1$$

$$\rightarrow n \geq 0 \rightarrow 1 - n \geq 0 \Rightarrow n \leq 1$$

$$D_f = [-1, 1]$$

$$ب) \sqrt{r} - |n-0| \geq 0 \xrightarrow{n \geq 0} -n + \sqrt{r} \leq 0 \Rightarrow n \geq \sqrt{r}$$

$$\xrightarrow{n < 0} n - \sqrt{r} \geq 0 \Rightarrow n \geq \sqrt{r}$$

$$\sqrt{r} - |n-0| \neq 1 \Rightarrow n \neq \sqrt{r}, -\sqrt{r}$$

$$D_f = [r, \infty) \cup [1, \infty) - \{\sqrt{r}, -\sqrt{r}\}$$

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$$الف) \cos n \neq 0 \quad D_f = \mathbb{R} - \{k\pi + \frac{\pi}{2}\}$$

$$ب) r \cos n - 1 \neq 0 \Rightarrow \cos n \neq \frac{1}{r} \Rightarrow D_f = \mathbb{R} - \{r k \pi \pm \frac{\pi}{r}\}$$

$$الف) |r n + 1| \neq |n + r| \Rightarrow r n^2 + r n + 1 \neq n^2 + 2 n r + r$$

$$r n^2 - r n - 1 \neq 0 \xrightarrow{ac} n^2 - r n - r \rightarrow n = \frac{-f}{r} \quad \mathbb{R} - \{\frac{-f}{r}, r\}$$

$$ب) |r n + 1| \geq |n + r| \Rightarrow r n^2 - r n - 1 \geq 0 \quad \frac{-f}{+b - b +}$$

$$D_f = (-\infty, \frac{-f}{r}] \cup [r, \infty)$$

$$\log_{\frac{1}{r}}^{\log_0(r n - 1)} \geq 0 \Rightarrow \log_0(r n - 1) \geq 1 \Rightarrow r n - 1 \geq 0 \Rightarrow n \geq \frac{1}{r}$$

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

$$\log_0(r n - 1) > 0 \quad r n - 1 > 1 \quad n > 1$$

$$D_f = [r, \infty)$$

$$الف) r \cos n + 1 > 0 \quad \cos n > -\frac{1}{r} \quad \text{⊗}$$

$$D_f = [r k \pi - \frac{r \pi}{r}, r k \pi + \frac{r \pi}{r}]$$

$$ب) \log_{\frac{r-1}{r+1}} \geq 0 \quad \frac{r-1}{r+1} > 1 \Rightarrow \frac{-r}{r+1} > 0 \quad \frac{-1}{+\frac{1}{r} -}$$

$$\frac{r-1}{r+1} > 0$$

$$D_f = (-\infty, -1)$$

$$1 - n|n| \geq 0 \rightarrow n \leq 0 \rightarrow 1 + n \geq 0 \Rightarrow n \geq -1$$

$$\rightarrow n \geq 0 \rightarrow 1 - n \geq 0 \Rightarrow n \leq 1$$

$$D_f = [-1, 1]$$

$$\text{ب) } r - |n-1| \geq 0 \xrightarrow{n \geq 0} -n + 1 \leq 0 \Rightarrow n \geq 1$$

$$\xrightarrow{n < 0} n - 1 \geq 0 \Rightarrow n \geq 1$$

$$r - |n-1| \neq 1 \Rightarrow n \neq r, r$$

$$D_f = [r, \infty) \cup [1, \infty) - \{r, r\}$$

$$\text{ج) } \cos n \neq 0 \quad D_f = \mathbb{R} - \{k\pi + \frac{\pi}{2}\}$$

$$\text{د) } r \cos n - 1 \neq 0 \Rightarrow \cos n \neq \frac{1}{r} \Rightarrow D_f = \mathbb{R} - \{r k \pi \pm \frac{\pi}{r}\}$$

$$\text{الف) } |r_{n+1}| \neq |n+r| \Rightarrow r n^2 + r n + 1 \neq n^2 + r n + r$$

$$r n^2 - r n - 1 \neq 0 \xrightarrow{\Delta} n^2 - r n - r \rightarrow n = \frac{-f}{r} \quad \mathbb{R} - \{\frac{-f}{r}, r\}$$

$$\text{ب) } |r_{n+1}| \geq |n+r| \Rightarrow r n^2 - r n - 1 \geq 0 \quad \frac{-f}{r} - \frac{r}{b} +$$

$$D_f = (-\infty, \frac{-f}{r}] \cup [r, \infty)$$

$$\log_{\frac{1}{r}} \log_0^{(r n - 1)} \geq 0 \Rightarrow \log_0^{(r n - 1)} \geq 1 \Rightarrow r n - 1 \geq 0 \Rightarrow n \geq \frac{1}{r}$$

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

$$\log_0^{(r n - 1)} > 0 \quad r n - 1 > 1 \quad n > 1$$

$$D_f = [r, \infty)$$

$$\text{الف) } r \cos n + 1 > 0 \quad \cos n > -\frac{1}{r} \quad \text{⊗}$$

$$D_f = [r k \pi - \frac{\pi}{r}, r k \pi + \frac{\pi}{r}]$$

$$\text{ب) } \log_{\frac{n-1}{n+1}} \geq 0 \quad \frac{n-1}{n+1} \geq 1 \Rightarrow \frac{-r}{n+1} \geq 0 \quad \frac{-1}{+\frac{1}{r}} -$$

$$\frac{n-1}{n+1} > 0$$

$$D_f = (-\infty, -1)$$