

مقطع: یازدهم دخترانه

Date

آشناختن با رازها

Subject

به نام خدا

۱۵۷۵ / اصل سوال های نه نوشته با بدقت مطالعه کن (برای بزرگ ها)

الف) $\frac{n+1}{2n^2+2n-12n+3}$ $n=1 \Rightarrow n=1$

n	n	n	$2n$
1	1	-1	2
2	2	0	-2
3	0	-2	0

$\Rightarrow D = R - \{-1, 1, 2\}$

$\rightarrow (n-1)(2n^2+2n-3) \neq 0$

$n \neq 1 \Rightarrow 2n^2+2n-3 = 0$

$2n^2+2n-3 = 0$

ب) $\frac{n+1}{2n^2+2n+1-12n+3}$ $n=-1$

n	n	n	$2n$
1	1	1	2
2	1	-1	-2
3	1	1	0

$\rightarrow (n+1)(2n^2+2n+3) \neq 0$

$n \neq -1$

$2n^2+2n+3 = 0$

$2n^2+2n+3 = 0$

$D = R - \{-1, 1, 2\}$

الف) $\frac{n+1}{n^2-2n^2+2n-1}$ $n=1$

n	n	n	$2n$
1	-1	1	2
2	1	-1	-2
3	1	1	0

$\rightarrow (n-1)(n^2-n+1) \neq 0$

$n \neq 1$

$n^2-n+1 \neq 0$

$D = R - \{1, 2\}$

$\Delta = 1 - 4 = -3 < 0$

ب) $\frac{n+1}{n^2-2n^2+2n-1}$ $n=-1$

n	n	n	$2n$
1	-1	1	2
2	1	-1	-2
3	1	1	0

$\rightarrow (n-1)(n^2-n+1) \neq 0$

$n \neq 1$

$n^2-n+1 \neq 0$

$D = R - \{-1, 2\}$

$\Delta = 1 - 4 = -3 < 0$

MAHAN

$$n^2 - \omega |n-1| - 2n + \omega \neq 0$$

$$n > 1 \quad n^2 - \omega n + 1 - 2n + \omega \neq 0$$

$$n^2 - 2n + \omega \neq 0$$

$$(n-1)(n-\omega) \neq 0$$

$$n \leq 1 \quad \hookrightarrow n = 1$$

$$n < 1$$

$$\rightarrow n^2 + \omega n - \omega - 2n + \omega \neq 0$$

$$n^2 + \omega n \neq 0 \rightarrow n(n+\omega) \neq 0$$

$$n \neq 0 \quad \hookrightarrow n \neq -\omega$$

$$\Rightarrow D = \{-\omega, 0, 1, \omega\}$$

$$\text{الف} \quad |[-n] - 2| > 0 \rightarrow [-n] > 2$$

$$\hookrightarrow n < -2 \quad D = (-\infty, -2)$$

$$\text{ب} \quad [n]^2 - 2[n] - 3 \neq 0$$

$$[n]^2 + 1 \neq 0 \rightarrow [n] \neq -1$$

$$([n] - 3)([n] + 1) \neq 0$$

$$\hookrightarrow n \notin [-1, 0)$$

$$\hookrightarrow [n] - 3 \neq 0 \rightarrow [n] \neq 3$$

$$\hookrightarrow n \notin [3, 4)$$

$$\Rightarrow D = ([3, 4) \cup [-1, 0))$$

$$\text{الف} \quad [n - 1/4] + [n + 1/4] > 0 \rightarrow [n - 1/4] + [n - 1/4] > +1$$

$$[n - 1/4] + [n + 1 - 1/4] > 0 \rightarrow 2[n - 1/4] > +1$$

$$[n - 1/4] > +1/2$$

$$n > 1/2$$

$$D = [1/2, +\infty)$$

$$\text{ب} \quad [n - 1/4] + [1/4 - n] > 0$$

$$\begin{cases} [n] + [-n] = -1 & n \in \mathbb{R} \\ [n] + [-n] = 0 & n \in \mathbb{Z} \\ [n] + [-n] > 0 & \end{cases}$$

MAHAN

$$D = \{n \mid n - 1/4 \in \mathbb{Z}\}$$

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

Subject
Cotn, bann باید تعریف نبوند

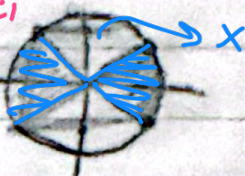
الف) $\tan n + 1 \neq 0 \rightarrow \tan n \neq -1$
 $D = R - \left\{ k\pi + \frac{3\pi}{4} \right\}$



(4) 1.5

(1)

ب) $1 - \sin^2 n > 0 \rightarrow 1 > \sin^2 n \rightarrow \frac{1}{2} > \sin n$
 انتهای بازه نباید از ابتدای آن کوچکتر باشد
 $\left[2k\pi + \frac{\pi}{6}, 2k\pi + \frac{5\pi}{6} \right]$
 $\frac{1}{2} > |\sin n|$
 $-\frac{1}{2} < \sin n < \frac{1}{2}$



الف) $2 \sin n - 1 > 0 \rightarrow 2 \sin n > 1 \rightarrow \sin n > \frac{1}{2}$

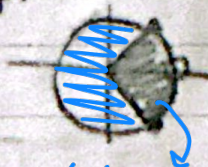
$$D = \left[2k\pi + \frac{\pi}{6}, 2k\pi + \frac{5\pi}{6} \right]$$



(1.5)

ب) $1 - 2 \cos n > 0 \rightarrow 1 > 2 \cos n \rightarrow \frac{1}{2} > \cos n$

$$D = \left[2k\pi - \frac{\pi}{3}, 2k\pi \right]$$



دایره یامیه $\frac{1}{2} \geq \cos n$ است

$$U \left(2k\pi, 2k\pi + \frac{\pi}{3} \right]$$

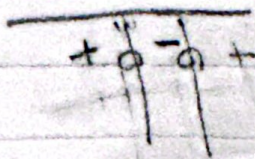
الف) $-1 < n^2 + 2n + 1 < 1 \rightarrow n^2 + 2n + 1 < 1 \rightarrow n^2 + 2n < 0$

$$\text{II} \rightarrow -1 < n^2 + 2n + 1$$

$$\text{II} \rightarrow -1 < n^2 + 2n + 1 \rightarrow n^2 + 2n + 2 > 0$$

$$(n+1)(n+2) > 0$$

$$-2 < n < -1$$



$$\rightarrow (-2, -1) \cup [-1, +\infty)$$

MAHAN

$$\rightarrow (-2, -1) \cup [-1, +\infty)$$

$$اب \rightarrow \Delta - 2n > 0 \rightarrow \Delta > 2n \rightarrow \Delta > n$$

شرط و ١٠؟

$$الف) 1 - \log_r^n > 0 \rightarrow 1 > \log_r^n \rightarrow \log_r^n < 1 \rightarrow n < r \quad D = (0, r)$$

$$اب) 1 - \log_{1/r}^n > 0 \rightarrow 1 > \log_{1/r}^n \rightarrow n > 1/r \rightarrow n > 0 \rightarrow (1/r, +\infty)$$

$$الف) r^{kn-n^2} - \Delta > 0 \rightarrow r^{kn-n^2} > \Delta \rightarrow \log_r \Delta < kn - n^2 \quad (1.0)$$

$$\rightarrow \log_r \Delta < kn - n^2 \rightarrow \log_r \Delta < n(k-n)$$

(1, 28)

$$ب) \frac{rn + \Delta}{rn + r} \leftarrow w \rightarrow n = -\frac{rw - \Delta}{rw - r} \rightarrow n = \frac{-rw + \Delta}{+rw - r}$$

$$D = \{n \mid n \in \frac{-rk + \Delta}{+rk - r}, k \in w\}$$

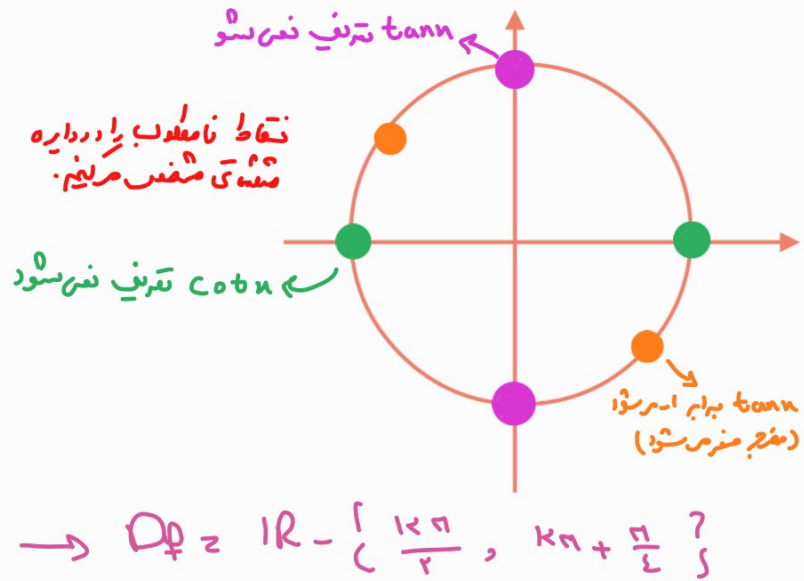
۵- الف) $\left\lceil n - \frac{1}{r} \right\rceil + \left\lceil n + \frac{r}{r} \right\rceil \geq 0 \xrightarrow{+1} \left\lceil n - \frac{1}{r} \right\rceil + 1 + \left\lceil n + \frac{r}{r} \right\rceil \geq 1$ [n] + k = [n + k]

$\left\lceil n + \frac{r}{r} \right\rceil + \left\lceil n + \frac{r}{r} \right\rceil \geq 1 \rightarrow \left\lceil n + \frac{r}{r} \right\rceil \geq \frac{1}{2}$ اولین عدد صحیح بزرگتر از $\frac{1}{2}$ برابر یک است! $n + \frac{r}{r} \geq 1$

$n \geq \frac{1}{r} \rightarrow D_f = \left[\frac{1}{r}, +\infty \right)$

۶- الف) $y = \frac{\cot x + 1}{\tan x + 1}$

نقاط نامعلوم را در دایره مشخص می‌کنیم.

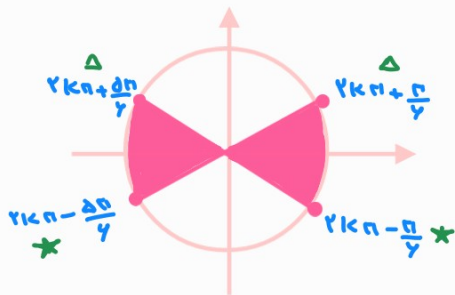


$x \neq k\pi + \frac{\pi}{2}$

$x \neq k\pi + \frac{\pi}{2} \cup x \neq k\pi$

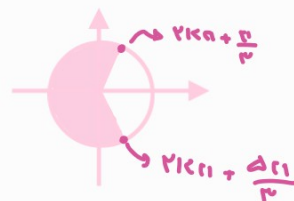
$\rightarrow x \neq \frac{k\pi}{r} \rightarrow D_f = \mathbb{R} - \left\{ \frac{k\pi}{r}, k\pi + \frac{\pi}{2} \right\}$

۶- ب) $1 - r \sin^2 x \geq 0 \rightarrow r \sin^2 x \leq 1 \rightarrow \sin^2 x \leq \frac{1}{r} \rightarrow -\frac{1}{r} \leq \sin x \leq \frac{1}{r}$



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

۷- ب) $1 - r \cos x \geq 0 \rightarrow \cos x \leq \frac{1}{r}$



$\rightarrow D_f = \left[rkn + \frac{\pi}{r}, rkn + \frac{\delta\pi}{r} \right]$

$$A - \text{الف} - 1) -1 \leq x^2 + 3n + 1 \leq 1 \xrightarrow{\sim \frac{9}{4} - \frac{9}{4}} -1 \leq x^2 + 3n + \frac{9}{4} - \frac{9}{4} \leq 1$$

$$\frac{1}{4} \leq x^2 + 3n + \frac{9}{4} \leq \frac{9}{4} \rightarrow \frac{1}{4} \leq \left(n + \frac{3}{4}\right)^2 \leq \frac{9}{4}$$

$$\int \left(n + \frac{3}{4}\right)^2 \leq \frac{9}{4} \rightarrow -\frac{3}{4} \leq n + \frac{3}{4} \leq \frac{3}{4} \rightarrow -3 \leq n \leq 0 \quad I$$

$$\int \left(n + \frac{3}{4}\right)^2 \geq \frac{1}{4} \rightarrow n + \frac{3}{4} \geq \frac{1}{4} \rightarrow n \geq -1 \quad \text{و} \quad n + \frac{3}{4} \leq -\frac{1}{4} \rightarrow n \leq -2 \quad II$$

$$I \cap II \rightarrow Df = [-3, -2] \cup [-1, 0]$$

$$A - \text{ب} - 1) \sqrt{5-2n} \rightarrow 5-2n \geq 0 \rightarrow n \leq \frac{5}{2}$$

$$\xrightarrow{\wedge} Df = \left[1, \frac{5}{2}\right]$$

$$-1 \leq \sqrt{5-2n} \leq 1 \rightarrow 5-2n \leq 1 \rightarrow -2n \leq -4 \rightarrow n \geq 2$$

عموده برقرار است ✓

$$10 - \text{الف} - 1) \frac{x_{n-1}^2}{2} - 1 \geq 0 \rightarrow \frac{x_{n-1}^2}{2} \geq 1 \rightarrow x_{n-1}^2 \geq 2 \rightarrow$$

$$n^2 - 2n + 3 \leq 0 \rightarrow (n-1)(n-3) \leq 0 \quad \begin{array}{c} 1 \quad 3 \\ + \quad | \quad - \quad | \quad + \\ 2n+2 \end{array} \rightarrow Df = [1, 3]$$

$$10 - \text{ب} - 1) \frac{w_n + \omega}{2n+2} \in W \rightarrow n \in -\frac{rw-\omega}{rw-r} \rightarrow n \in \frac{\omega-rw}{rw-r}$$

$$Df = \left\{ n \mid n = \frac{-rk+\omega}{rk-r}, k \in W \right\}$$