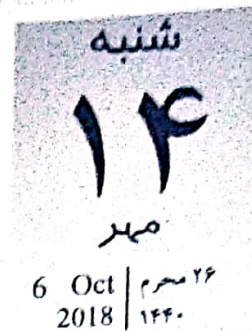


۱۸,۷۵



$$\begin{array}{r}
 x^3 - 2x^2 + 2x - 1 \quad | \quad x-1 \\
 \underline{-(x^3 - x^2)} \quad -2 \\
 -x^2 + 2x - 1 \\
 \underline{-(x^2 - x)} \quad -1 \\
 -x + 1 \\
 \underline{-(-x + 1)} \quad 0
 \end{array}$$

الف) $\Delta = 1 - 4 < 0$
 (x-b) → 1

$D_f = \mathbb{R} - \{1\}$

ب) $\frac{x+3}{x^3-2x^2+2x-1} \geq 0$

$\begin{cases} x+3 \geq 0 \\ x-1 > 0 \end{cases} \rightarrow \Delta < 0 \rightarrow x > 1$

تقریب علامت!

$\frac{-3}{+} \frac{1}{-} \frac{1}{+} \frac{1}{+} \rightarrow D_f = \mathbb{R} - (-3, 1]$



$(1, +\infty) = \mathbb{R}$ ۱,۵

$\frac{2}{x^2 - \Delta(x-1) - 2x + \Delta} \neq 0 \rightarrow \frac{0}{1} = 1$

if $\rightarrow x \geq 1 \rightarrow x^2 - \Delta x + \Delta - 2x + \Delta \Rightarrow x^2 - 2x + 1 \rightarrow (x-1)(x-1)$

$\left. \begin{array}{l} \rightarrow x < 1 \rightarrow x^2 + \Delta x - \Delta - 2x + \Delta \leq x^2 + 3x \rightarrow x(x+3) \end{array} \right\} \mathbb{R}$

$$Df \in \mathbb{R} - \{ \cancel{-3}, 0, 2, 5 \}$$

ارائه جواب سوال ۳ =

$$\text{الف) } [n] - 2 \geq 0 \rightarrow [-n] \geq 2 \quad -n \geq 2 \quad n \leq -2$$

$$Df \in (-\infty, \cancel{-2}] \quad \text{پ}$$

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

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

$$\begin{aligned} [n] \geq 3 &\rightarrow n \in [3, 4) \\ [n] \leq -1 &\rightarrow n \in [-1, 0) \end{aligned} \quad \bigg\} \rightarrow Df \in \cancel{(-\infty, -1)} \cup [0, 3) \cup [4, +\infty)$$

$$\text{الف) } [n - \frac{1}{3}] + [n + \frac{2}{3}] \geq 0$$

$$[n - \frac{1}{3} + 1] + [n + \frac{2}{3}] \rightarrow 2[n + \frac{2}{3}] - 1 \geq 0 \rightarrow [n + \frac{2}{3}] \geq \frac{1}{2}$$

$$n + \frac{2}{3} \geq 1 \rightarrow n \geq \frac{1}{3} \quad Df \in \cancel{[\frac{1}{3}, +\infty)} \quad \text{پ}$$



$$\therefore t = n - \frac{1}{p}$$

$$[t] + [-t] \rightarrow t \in \mathbb{Z} \rightarrow 0$$

$$t \notin \mathbb{Z} \rightarrow -1$$

→ دایره کامل → $n \geq 0$

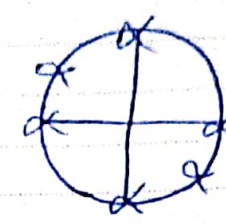
① حالت

$$G(t \in \mathbb{Z} \rightarrow 0)$$

$$n - \frac{1}{p} \in \mathbb{Z} \rightarrow P_L = \{n\} \frac{1}{p} + k \mid k \in \mathbb{Z}$$

الف) $\frac{\cos n-1}{\tan n+1}$

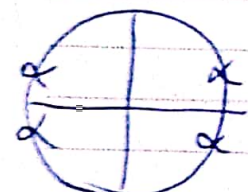
$\rightarrow \tan n \neq -1$
 $\cos n \neq 0$
 $\sin n \neq 0$



$D_f \subset \mathbb{R} - [\frac{ka}{r}, ka - \frac{a}{r}]$

۲

$\therefore \rightarrow 1 - r \sin^2 n \geq 0 \rightarrow 1 \geq r \sin^2 n \rightarrow \sin n \geq -\frac{1}{r}$



$\rightarrow D_f \subset [\cancel{rka - \frac{a}{r}}, rka + \frac{a}{r}] \cup [rka + \cancel{\frac{a}{r}}, rka, \frac{ka}{r}]$

انف $\rightarrow r \sin n - 1 \geq 0 \rightarrow \sin n \geq \frac{1}{r}$

$D_f \subset [rka + \frac{a}{r}, rka + \frac{ka}{r}]$

$\therefore \rightarrow 1 - r \cos n \geq 0$
 $\rightarrow \frac{1}{r} \geq \cos n$

۱، ۵

$[rka + \frac{a}{r}, rka - \frac{a}{r}]$

استه ی بازه باید از ابتدای بازه بزرگتر باشد

$D_f = [rka + \frac{a}{r}, rka + \frac{ka}{r}]$

درجہ سبب - کافی

کلاس C

جمعہ

۱۳

مہر

5 Oct 2018 | ۲۵ محرم ۱۴۴۰

پنج شنبہ

۱۲

مہر

4 Oct 2018 | ۲۴ محرم ۱۴۴۰

$$\begin{array}{r} 2x^3 + 3x^2 - 11x + 3 \quad | \quad x-1 \\ \underline{2x^3 + 2x^2} \\ 1x^2 - 11x + 3 \end{array}$$

$$2x^2 + 5x - 3 \rightarrow x^2 + 5x - 4$$

$$\rightarrow (x-1)(x+3)(x-\frac{1}{2})$$

$$\underline{1x^2 - 11x + 3}$$

$$\underline{1x^2 - 5x}$$

$$\underline{-6x + 3}$$

$$\underline{-6x + 3}$$

0

(الف)

$$Df = IR - \left\{ -\frac{3}{2}, -\frac{1}{2} \right\}$$

۲

$$\begin{array}{r} 2x^3 + 9x^2 + 10x + 3 \quad | \quad x+1 \\ \underline{2x^3 + 2x^2} \\ 7x^2 + 10x + 3 \end{array}$$

$$2x^2 + 7x + 3 \rightarrow x^2 + 7x + 4.5$$

$$\underline{7x^2 + 10x + 3}$$

$$\underline{7x^2 + 7x}$$

$$\underline{3x + 3}$$

$$\underline{3x + 3}$$

0

$$Df = IR - \left\{ -1, -\frac{3}{2}, -\frac{1}{2} \right\}$$

۱۳ - شہادت حضرت امام زین العابدین (ع) (۹۵ ه.ق) به روایتی - هجرت حضرت امام خمینی (ره) از عراق به پاریس (۱۳۵۷ ه.ش) - روز نیروی انتظامی

$$\arcsin(n^r + wn + 1) \rightarrow -1 \leq n^r + wn + 1 \leq 1$$

① $-1 \leq n^r + r n + 1 \rightarrow 0 \leq (n+1)(n+r)$

$$+ \quad | \quad - \quad | \quad +$$

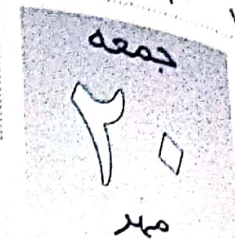
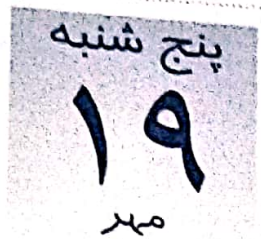
(r) $n^r + r n + 1 \leq 1$ $n^r + r n \leq 0$ $n(n+r) \leq 0 \rightarrow 0, 9 - r$

$$\begin{array}{c} -\infty \quad 0 \\ \hline + \quad | \quad - \quad | \quad + \\ \quad \quad \quad \cup \end{array} \quad D\mathcal{L} \, s[-\infty, 0]$$

$\mathcal{A} \rightarrow$
 $D\mathcal{L}_s[-r, -r] \cup [-1, 0]$

$$b) \Delta - \gamma n > 0 \rightarrow n \leq \frac{0}{\gamma}$$

$$\left. \begin{array}{l} \text{ii) } \Delta - r_n > 0 \rightarrow n \leq \frac{\Delta}{r} \\ -1 \leq \sqrt{\Delta - r_n} \leq 1 \rightarrow \Delta - r_n \leq 1 \quad n \geq r \end{array} \right\} n \rightarrow \left[r, \frac{\Delta}{r} \right]$$



$$\log_2 n \rightarrow \{n > 0\} \rightarrow 1 - \log_2 n > 0$$

$$\hookrightarrow 1 > \log_2 n \rightarrow \{n < 3\}$$

$$Df_s(0, 3)$$

۱.۵

$$1 - \log_2 \frac{1}{x} > 0 \rightarrow 1 > \log_2 \frac{1}{x} \rightarrow \frac{1}{x} > 1$$

چون متناهی است و ثابت است. نامعادله عوض می شود

$$Df_s(0, \frac{1}{x}) \quad \text{و با } \frac{1}{x} < 1 \rightarrow x > \frac{1}{x} \rightarrow Df_s = (\frac{1}{x} + \infty)$$

$$\frac{x^2 - n^2}{2} - 1 \geq 0 \quad \frac{x^2 - n^2}{2} \geq 1 \rightarrow \log_2 x \geq \log_2 n - 1$$

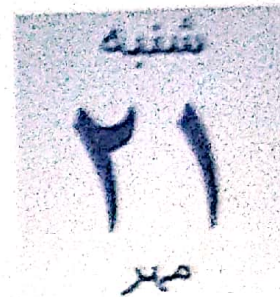
$$x^2 - n^2 \geq 3 \rightarrow (x-1)(x-3) \leq 0$$

$$\begin{array}{c|c|c} 1 & 3 & \\ \hline + & - & + \end{array} \rightarrow Df_s [1, 3]$$

۲

$$\frac{1}{6} = \left(\frac{r n + d}{r n + k} \right) ! \quad \frac{r n + d}{r n + k} \in W$$

$$n = -\frac{r W - d}{r W - r} \rightarrow \left\{ n \mid n = \frac{r k - d}{r - r k}, k \in W \right\}$$



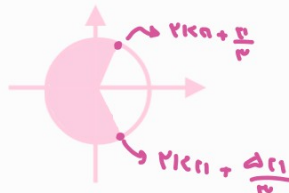
13 Oct 2018
مهر ۱۳۹۷

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

صمیم ضرایب مناسبت (بخش پذیری بر ۱-۱) $\rightarrow$ د.د. ندارد! $\rightarrow$ د.د.

$\frac{-3}{+0} \quad \frac{1}{-0} \quad +$ $\sim D_f = (-\infty, -3] \cup (1, +\infty)$

۳- ب) $1-2\cos n \geq 0 \rightarrow \cos n \leq \frac{1}{2}$



$\rightarrow D_f = [2k\pi + \frac{\pi}{3}, 2k\pi + \frac{5\pi}{3}]$

۴- ب) $y = \log_2 (1 - \log_2 \frac{1}{x}) \rightarrow \log_2 \frac{1}{x} \rightarrow n > 0$

$\hookrightarrow 1 - \log_2 \frac{1}{x} > 0 \rightarrow \log_2 \frac{1}{x} < 1 \xrightarrow{\text{مناسب} \begin{pmatrix} 1 \\ 2 \end{pmatrix}} n > \frac{1}{2}$

$D_f = (\frac{1}{2}, +\infty)$