

بناظر

تکلیف

بناظر مکتوب
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$$\text{و ۱) } 2n^2 + 3n^2 - 1n + 2 \neq 0 \quad (x-1)(x-\frac{1}{2})(x+2) \neq 0$$

①

$$\begin{array}{r} 2n^2 + 3n^2 - 1n + 2 \\ - 2n^2 - 2n^2 \\ \hline 5n^2 - 1n + 2 \end{array} \quad \begin{array}{r} x-1 \\ 2n^2 + 5n - 2 \end{array}$$

$$D_f = \mathbb{R} - \{1, \frac{1}{2}, -2\}$$

$$\begin{array}{r} 5n^2 - 1n + 2 \\ - 5n^2 - 5n \\ \hline -6n + 2 \\ - -6n + 6 \\ \hline -4 \end{array} \quad \Delta = 16 - 4(-2)(2) = 40$$

$$x_{1,2} = \frac{-a \pm \sqrt{\Delta}}{a} = \frac{1 \pm \sqrt{10}}{5}$$

$$\text{و ۲) } 2n^2 + 9n^2 + 10n + 2 \neq 0$$

$$\begin{array}{r} 2n^2 + 9n^2 + 10n + 2 \\ - 2n^2 + 2n^2 \\ \hline 7n^2 + 10n + 2 \\ - 7n^2 + 7n \\ \hline 17n + 2 \\ - 17n + 17 \\ \hline 15 \end{array} \quad \begin{array}{r} x+1 \\ 2n^2 + 7n + 2 \end{array}$$

$$\Delta = 49 - 4(2)(2) = 25$$

$$x_{1,2} = \frac{-b \pm \sqrt{\Delta}}{a} = \frac{-7 \pm 5}{2}$$

$$D_f = \mathbb{R} - \{-1, -2, -\frac{1}{2}\}$$

$$(n+1)(n+\frac{1}{2})(n+2) \neq 0$$

$$\text{و ۳) } 2n^2 - 2n^2 + 2n - 1 \neq 0$$

$$\begin{array}{r} 2n^2 - 2n^2 + 2n - 1 \\ - 2n^2 - 2n^2 \\ \hline 4n^2 - 2n - 1 \\ - 4n^2 + 4n \\ \hline 2n - 1 \\ - 2n + 2 \\ \hline 1 \end{array} \quad \begin{array}{r} x-1 \\ 2n^2 - 2n + 1 \end{array}$$

$$\Delta = 1 - 4(1)(1) < 0$$

$$(x-1)(x^2 - x + 1)$$

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

$$\text{و ۴) } \frac{x^2 + 1}{x^2 - 2x^2 + 2x + 1} \geq 0 \quad , \quad x^2 - 2x^2 + 2x + 1 \neq 0$$

$$\begin{array}{r} x+1 \\ (x-1)(x^2 - x + 1) \end{array} \geq 0$$

$$\begin{array}{r} x^2 - 2x^2 + 2x + 1 \\ - x^2 - 2x^2 \\ \hline 3x^2 + 2x + 1 \\ - 3x^2 + 3x \\ \hline 5x + 1 \\ - 5x + 5 \\ \hline 4 \end{array} \quad \begin{array}{r} x-1 \\ x^2 - 2x + 1 \end{array}$$

$$\Delta = 1 - 4(1)(1) < 0$$

$$\begin{array}{r} -1 \\ +1 \end{array}$$

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

Arman

$$\omega \leftarrow \begin{matrix} \rightarrow r \\ (x-a)(n-r) = 0 \\ x^r - v n + 10 = 0 \end{matrix}$$

$$x^r - \omega(n-1) - rn + \omega \neq 0 \quad \begin{cases} x^r - \omega(x-1) = rn + \omega & x \geq 0 \\ x^r + \omega(n-1) - rn + \omega & x \leq 0 \end{cases} \quad (14)$$

$$D_F = \mathbb{R} - \{-r, 0, r, \omega\}$$

$$x^r + rx = 0$$

$$x = 0 \quad \leftarrow \quad x = -r$$

$$\text{الف) } [-x] - r \geq 0 \Rightarrow [-n] \geq r \quad (15)$$

$$[t] \geq r \Rightarrow t \geq r \Rightarrow -x \geq r \Rightarrow x \leq -r$$

$$D_F = (-\infty, -r]$$

$$\text{ب) } [x] = t \quad t^r - rt - r \neq 0 \Rightarrow t \neq -1, r$$

$$[x] \neq -1, r \Rightarrow x \notin [-1, 0) \cup [r, r)$$

$$D_F = \mathbb{R} - \left[[-1, 0) \cup [r, r)\right] = (-\infty, -1) \cup [0, r) \cup [r, +\infty)$$

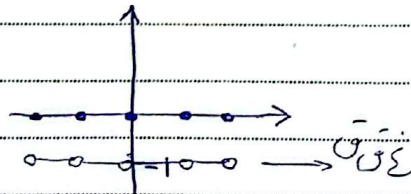
$$\text{الف) } 1 - [x - \frac{1}{p}] + [x + \frac{1}{p}] \geq 0 \Rightarrow r[x + \frac{1}{p}] \geq 1 \Rightarrow [x + \frac{1}{p}] \geq \frac{1}{r} \quad (16)$$

$$\Rightarrow 1 \leq x + \frac{1}{p}$$

$$D_F = \left[\frac{1}{p}, +\infty\right)$$

$$\text{ب) } [x - \frac{1}{p}] + [\frac{1}{p} - x] \Rightarrow [t] + [-t] \geq 0 \Rightarrow t \in \mathbb{Z}$$

$$x - \frac{1}{p} \in \mathbb{Z} \Rightarrow$$



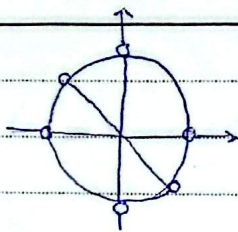
$$D_F = \{x \mid x = k + \frac{1}{p}, k \in \mathbb{Z}\}$$

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الف) $\sin x, \cos x \neq 0$

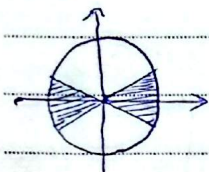
$\tan x + 1 \neq 0 \Rightarrow \tan x \neq -1$

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



④

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

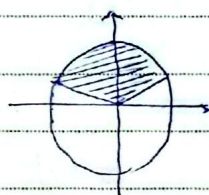


$D_f = \left[k\pi - \frac{\pi}{r}, k\pi + \frac{\pi}{r} \right]$

$-\frac{1}{r} \leq \sin x \leq \frac{1}{r}$

الف)

$r \sin x - 1 \geq 0 \Rightarrow \sin x \geq \frac{1}{r}$

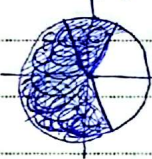


$D_f = \left[r k \pi + \frac{\pi}{r}, r k \pi + \frac{\pi}{r} \right]$

⑤

ب)

$1 - r \cos x \geq 0 \Rightarrow \frac{1}{r} \geq \cos x$



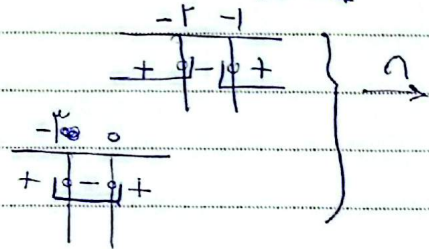
$D_f = \left[r k \pi + \frac{\pi}{r}, r k \pi + \frac{\pi}{r} \right]$

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الف)

$-1 \leq x^2 + r x + 1 \leq 1 \Rightarrow x^2 + r x + r \geq -1 \Rightarrow$

$x^2 + r x \leq 0$



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

ب) $a - r x \geq 0 \Rightarrow x \leq \frac{a}{r}$

$-1 \leq \sqrt{a - r x} \leq 1 \Rightarrow a - r x \leq 1 \Rightarrow r \leq x$

$D_f = [r, a]$

الف) $1 - \log_r x > 0 \Rightarrow 1 > \log_r x \Rightarrow x < r$
 $\log_r x > 0 \Rightarrow x > 1$
 $D_f = (1, r)$

Arman

$$\neg) 1 - \log \frac{x}{p} > 0 \Rightarrow 1 > \log \frac{x}{p} \Rightarrow x < \frac{1}{p} \left. \begin{array}{l} \log \frac{x}{p} > 0 \\ \log \frac{1}{p} > 0 \end{array} \right\} \Rightarrow D_F = (0, \frac{1}{p})$$

$$p^{fn-n} - p^p \geq 0 \Rightarrow \text{~~scribbles~~} \quad (10)$$

$$p^{-x^r+fn} \geq p^p \Rightarrow -x^r + \epsilon n \geq p \Rightarrow$$

$$x^r - \epsilon n + p \leq 0 \Rightarrow \frac{1}{p} \leq \frac{1}{x^r - \epsilon n}$$

$$D_F = [1, p]$$

$$\neg) \frac{pn+a}{pn+\epsilon} \in W \Rightarrow \frac{-(pw-a)}{pw-p} = x \Rightarrow$$

$$D_F = \{x \mid x = \frac{-(k+a)}{pk-p}, k \in W\}$$

$$\frac{px+a}{pn+\epsilon} \in W \Rightarrow pw+n+\epsilon w = px+a \Rightarrow$$

$$x(pw-p) = a - \epsilon w \Rightarrow x = \frac{-(pw+a)}{pw-p}$$