

$$الف) = \frac{n+3}{(n-1)(2n^2+\omega n-3)} \xrightarrow{\frac{-\omega \pm \sqrt{\omega^2+24}}{2}} \frac{n+3}{(n-1)(n+3)(n-\frac{1}{2})} \rightarrow D_f = \mathbb{R} - \{-\frac{3}{2}, \frac{1}{2}, 3\} \quad (1)$$

$$ب) \frac{n+3}{(n+1)(2n^2+Vn+3)} \xrightarrow{\frac{-V \pm \sqrt{V^2-24}}{2}} \frac{n+3}{(n+1)(n+3)(n+1)} \rightarrow D_f = \mathbb{R} - \{-\frac{3}{2}, -\frac{1}{2}, -3\}$$

$$الف) \frac{n+3}{(n-1)(n^2-n+1)} \xrightarrow{\frac{\Delta < 0}{\text{discriminant}} \frac{n+3}{(n-1)(n^2-n+1)}} \rightarrow D_f = \mathbb{R} - \{1\} \quad (2)$$

$$ب) \sqrt{\frac{n+3}{(n-1)(n^2-n+1)}} \xrightarrow{\frac{-3 \pm \sqrt{9-4}}{2}} \rightarrow D_f = (-\infty, -3] \cup (1, +\infty)$$

$$n > 1 \rightarrow n^2 - \omega n + \omega - 2n + \omega = n^2 - Vn + 1 \quad (n-1)(n-\omega) \neq 0, \omega \neq 1 \quad (3)$$

$$n < 1 \rightarrow n^2 - \omega + \omega n - 2n + \omega = n^2 + 3n \quad n(n+3), n \neq 0, -3 \quad (4)$$

$$n = 1 \rightarrow n^2 - 2n + \omega = 1 - 2 + \omega = \omega - 1 \quad (5) \quad I, II, III \rightarrow D_f = \mathbb{R} - \{-\frac{3}{2}, \frac{1}{2}, \omega\}$$

$$الف) |2n+1| \neq |n+3| \rightarrow 2n^2+2n+1 \neq n^2+6n+9 \rightarrow n^2-4n-8 \neq 0 \quad (6)$$

$$\rightarrow \frac{4 \pm \sqrt{16+32}}{2} = 2 \pm \sqrt{12} \rightarrow D_f = \mathbb{R} - \{-\frac{4}{3}, 2\}$$

$$ب) |2n+1| \geq |n+3| \rightarrow 2n^2-2n-1 \geq 0 \rightarrow \frac{-2 \pm \sqrt{4+8}}{4} \rightarrow D_f = (-\infty, -\frac{1}{2}] \cup [\frac{1}{2}, +\infty)$$

$$الف) n > 0, 1 > \log_n 3 \rightarrow 3 > n \rightarrow D_f = (0, 3) \quad (7)$$

$$ب) n > 0, 1 > \log_{\frac{1}{n}} 3 \rightarrow \frac{1}{n} < 3 \rightarrow D_f = (\frac{1}{3}, +\infty)$$

$$الف) 2n > 1 \rightarrow n > \frac{1}{2}, \log_{\omega}^{(2n-1)} > 0 \rightarrow 2n-1 > 1 \rightarrow n > 1, \log_{\omega}^{(2n-1)} > 0 \quad (8)$$

$$\rightarrow \log_{\omega}^{(2n-1)} \leq 1 \rightarrow 2n-1 \leq \omega \rightarrow n \leq \frac{\omega+1}{2} \rightarrow D_f = (1, \frac{\omega+1}{2}]$$

$$الف) 2n+1 > 0 \rightarrow 2n > -1 \rightarrow D_f = (-\frac{1}{2}, +\infty) \quad (9)$$

$$ب) \frac{n-1}{n+1} > 0 \rightarrow \frac{-1}{2} < \frac{n-1}{n+1} \rightarrow \log_{\frac{n-1}{n+1}} > 0 \rightarrow \frac{n-1}{n+1} > 1$$

$$\rightarrow \frac{n-1}{n+1} - 1 > 0 \rightarrow \frac{n-1-n-1}{n+1} > 0 \rightarrow \frac{-2}{n+1} > 0 \rightarrow D_f = (-\infty, -1)$$



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به سمت منفی بی نهایت می رود $a < -2$
فرمانده آن از مجموعه قدرت $[3 و -5]$ نمی شود

SUBJECT

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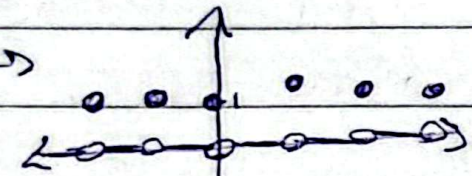
سوی می نیم داری شود و مرکز بازه دایره آن $[3 و -5]$ نخواهد بود $a > -2$

$$\begin{aligned} &\rightarrow a = -2 \rightarrow \text{تابع خطی است} \rightarrow -2n + b \geq 0 \rightarrow b \geq 2n \\ &\rightarrow \frac{b}{2} \geq n \text{ و } 3 \geq n \rightarrow \boxed{b = 6} \end{aligned}$$

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$$\begin{aligned} &b^2 - 4ac \leq 0 \rightarrow 1 - 4(2 - m^2) \leq 0 \rightarrow m^2 - 1 \leq 0 \rightarrow \frac{-1}{+} \frac{1}{-} \\ &-1 \leq m \leq 1 \rightarrow \begin{cases} \text{Max } m: 1 \\ \text{Min } m: -1 \end{cases} \rightarrow |1 - (-1)| = \boxed{2} \end{aligned}$$

b

$$[n] + [-n] + 1 \rightarrow$$


$$\Rightarrow I$$

$$1 - n^2 \geq 0 \rightarrow \frac{-1}{-} \frac{1}{+} \rightarrow [-1, 1] \quad II$$

$$I, II \Rightarrow D_c = \{ -2, -1, 0, 1, 2 \} \rightarrow \text{مجموعه مقادیر صحیح}$$

نکته: نویسنده تقسیم های سوال را با ω و ν انجام داده است.

$$\begin{array}{r} 2n^3 + 3n^2 \\ - 2n^3 + 2n^2 \\ \hline \omega n^2 \\ - \omega n^2 + \omega n \\ \hline \end{array}$$

$$\begin{array}{r} 2n^3 + 3n^2 - 2n^3 + 2n^2 \\ \hline \omega n^2 + \omega n \end{array}$$

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

ω

$$\frac{-\omega + \nu}{\omega} = -\nu, \frac{1}{\omega} \times \omega$$

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

$$(2n^2 + 3n)$$

$$n + \nu$$

$$(n + \nu)(n - \frac{1}{\nu})(n - 1)$$

$$\frac{2n^3 + 3n^2 - 2n^3 + 2n^2}{n^3 + \omega n^2} = \frac{\omega n^2 + \omega n}{n^3 + \omega n^2}$$

$$n + \nu$$

$$\begin{array}{r} 2n^3 + 9n^2 + 6n + 3 \\ \hline 2n^3 - 2n^2 \\ \hline \nu n^2 \\ \nu n^2 - \nu n \\ \hline \end{array}$$

$$\begin{array}{r} 2n^3 + 9n^2 + 6n + 3 \\ \hline 2n^3 - 2n^2 \\ \hline \nu n^2 + \nu n + 3 \end{array}$$

$$\begin{array}{r} \nu n + \nu \\ + \nu n + \nu \\ \hline \end{array}$$

فا