

نام خانوادگی نوشته شده است و مغیره سفا صفر لفظ بر سر!

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SUBJECT:

Year:

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$$(a-2)x^2 + ax + b \geq 0$$

①

$$\begin{array}{c|ccc} x & & & \\ \hline p & - & 0 & + \end{array} \rightarrow \text{خطی} \quad \begin{array}{l} a=p \\ x+b \geq 0 \\ y+b=0 \\ b=-y \end{array}$$

②.

$$\textcircled{1} \rightarrow (x+1)^p \rightarrow x^p + px + 1 \quad p - m^p = 1$$

$$m^p = 1 \quad m = \pm 1$$

$$+1 - (-1) = 2$$

$$x^2 - x^2 \geq 0 \quad x^2 < \varepsilon \quad -1 \leq x \leq 1$$

③

$$n \in \mathbb{Z} \rightarrow [n] + [-n] + 1 = 1$$

$$n \notin \mathbb{Z} \rightarrow [n] + [-n] + 1 < 0$$

$$[x] + [-x] \neq -1 \quad x \notin \mathbb{Z} \quad \{x \mid -1 \leq x \leq 1 \quad x \in \mathbb{Z}\}$$

$x \in \mathbb{Z}$ قابل قبول است!

$$x^3 + 3x^2 \geq 0 \quad x^2(x+3) \geq 0$$

$$D = [-3, +\infty)$$

④

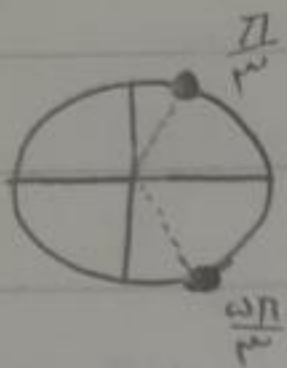
$$\frac{(x+1)(x-1)x^2(x-3)}{(x-1)(x^2+x+1)} \geq 0$$

$$\begin{array}{c|ccccc} x & -1 & 0 & 1 & 3 \\ \hline p & + & - & - & + \end{array}$$

$$D = (-\infty, -1] \cup [3, +\infty) \cup \{0\}$$

Benobar

ب. $\mu \cos x - 1 \neq 0 \quad \mu \cos x \neq 1 \quad \cos x \neq \frac{1}{\mu} \quad (\checkmark)$



$$D = \mathbb{R} - \left\{ \mu k\pi - \frac{\pi}{\mu}, \mu k\pi + \frac{\pi}{\mu} \right\} \quad (\checkmark)$$

الف $|\mu x + 1| - |x + \mu| = 0 \quad |\mu x + 1| = |x + \mu| \quad (\wedge)$

$$\mu x + 1 = x + \mu \quad x \neq \mu$$

$$\mu x + 1 = -x - \mu \quad \mu x = -\mu - 1$$

$$x \neq \frac{-\mu - 1}{\mu}$$

$$D = \mathbb{R} - \left\{ \pm \frac{\mu + 1}{\mu} \right\}$$

ب. $|\mu x + 1| - |x + \mu| > 0$

$$(|\mu x + 1|)^2 > (|x + \mu|)^2$$

$$x^2 - \mu x - \mu > 0$$

$$(x - \mu)(x + 1) > 0$$

$$\mu = \frac{-1}{\mu} \quad \frac{-1}{\mu}$$

$$\mu^2 x + 1 + \mu x > x^2 + \mu + \mu x$$

$$\mu^2 x - \mu x - \mu > 0$$

$$\frac{x}{\mu} + \frac{1}{\mu} - \frac{1}{\mu} > 0$$

$$D = \left(-\infty, -\frac{1}{\mu} \right) \cup \left(\frac{1}{\mu}, +\infty \right)$$

$$\mu x - 1 > 0 \quad \mu x > 1 \quad x > \frac{1}{\mu} \quad (\textcircled{9})$$

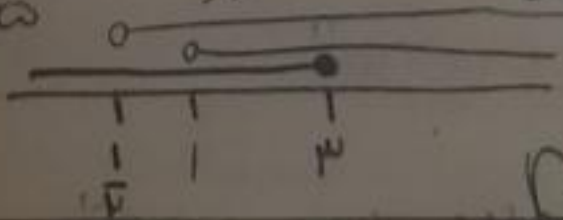
$$\log_{\omega}^{\mu x - 1} > 0 \quad \mu x - 1 > 1 \quad \mu x > 2 \quad x > \frac{2}{\mu}$$

$$\log_{\omega}^{\log_{\omega}^{\mu x - 1}} > 0$$

$$\log_{\omega}^{\mu x - 1} \leq 1$$

$$\mu x - 1 \leq \omega$$

$$x \leq \frac{\omega + 1}{\mu}$$



$$D = (1, \mu]$$

Senobar

الف $\mu \cos x + 1 > 0 \Rightarrow \cos x > -\frac{1}{\mu}$



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$\left(\mu\pi - \frac{\pi}{\mu}, \mu\pi + \frac{\pi}{\mu} \right)$

ب- $\frac{x-1}{x+1} > 0$

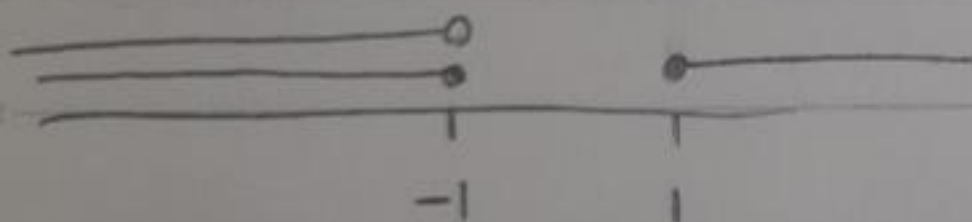
x	-1	1
$+$	$-$	$+$

$\log \frac{x-1}{x+1} \geq 0 \Rightarrow \frac{x-1}{x+1} \geq 1$

$\frac{x-1-x-1}{x+1} \geq 0 \Rightarrow \frac{-2}{x+1} \geq 0$

x	-1
$+$	$-$

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$\Rightarrow D = (-\infty, -1)$

(۳) عبارت مفرج باید صاف باشد!

$$x \in \mathbb{Z} = \overset{0}{[n]} + [-n] + 1 = 1 \quad \checkmark$$

$$[n] + [-n] + 1$$

$$\rightarrow x \in \mathbb{Z}$$

$$\rightarrow x \notin \mathbb{Z} = \overset{-1}{[n]} + [-n] + 1 = 0 \quad \times$$

$$4 - n^2 \geq 0 \rightarrow n^2 \leq 4 \rightarrow -2 \leq n \leq 2$$

جدول زیر را بساز تا متوجه باشی!

$$\hookrightarrow D_f = \{-2, -1, 0, 1, 2\}$$

دامنه شامل ۵ عدد صحیح است!