

با سفتا به تشریحی تکلیف شما در کلاس اراضی داشته

۱۷/۵ راه حل اول دکتر بنویس از هفته آینده!

$$\sqrt{(a-2) + an + b}$$

$$\rightarrow a=2$$

$$2n + b \rightarrow n=3$$

$$6 + b = 0$$

$$b = -6$$

$$\Delta < 0$$

$$f - f(2-m^2) \leq 0$$

$$-f + m^2 \leq 0$$

$$f(m^2-1) \leq 0$$

$$(m^2-1) \leq 0$$

$$m^2 < 1 \quad -1 \leq m \leq 1$$

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

$$D \rightarrow n^2 \leq 4$$

$$D=2 \quad -2 \leq n \leq 2$$

راه حل ناقص!

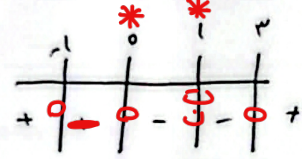
عدد

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$$\sqrt{x^2(x+3)} \rightarrow x+3 > 0$$

$$x > -3$$

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



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

$$y = \sqrt{\frac{(x+1)(x-1)(x^2)(x-3)}{(x-1)(x^2+x+1)}}$$

$$\sqrt{|x-2|-3}$$

$$|x-2| \geq 3$$

$$x-2 \geq 3 \rightarrow x \geq 5$$

$$x-2 \leq -3 \rightarrow x \leq -1$$

$$D = (-\infty, -1] \cup [5, +\infty)$$

$$\sqrt{4-|2-x|}$$

$$4 \geq |2-x|$$

$$-4 \leq 2-x \leq 4$$

$$-6 \leq -x \leq 2$$

$$6 \geq x \geq -2$$

$$D = [-2, 6]$$

$$\sqrt{1-n|n|}$$

$$n < 0 \rightarrow -n^2 \rightarrow 1+n^2 > 0$$

$$n > 0 \rightarrow n^2 \rightarrow 1-n^2 > 0 \rightarrow 1 > n^2 \rightarrow -1 < n \leq 1$$

$$D = (-\infty, 1]$$

$$\frac{1}{\sqrt{2-|n-2|-1}}$$

$$2-|n-2| \geq 0$$

$$2-|n-2| \neq 0$$

$$2 \geq |n-2|$$

$$2 \neq |n-2|$$

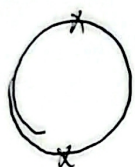
$$-2 \leq n-2 \leq 2$$

$$n \neq 0, 4$$

$$0 \leq n \leq 4$$

$$D = [2, 4] - \{0, 4\}$$

الف)

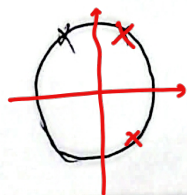


$$D = \mathbb{R} - \left\{ k\pi + \frac{\pi}{2} \right\}$$

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ب)

$$\begin{aligned} r \cos \pi &\neq 1 \\ \cos \pi &\neq \frac{1}{r} \end{aligned}$$



$$D = \mathbb{R} - \left\{ k\pi + \frac{\pi}{2}, k\pi + \frac{\pi}{2} - \frac{\pi}{2} \right\}$$

$$x \cdot \sin = -\frac{1}{r} \quad r \cos = \frac{1}{r} \quad r \sin = \frac{1}{r}$$

الف)

$$|x+1| \neq |x+3|$$

$$\begin{aligned} x+1 &= x+3 \Rightarrow x=2 \\ x+1 &= -x-3 \Rightarrow x = -\frac{4}{2} = -2 \end{aligned}$$

$$D = \mathbb{R} - \left\{ 2, -2 \right\}$$

ب)

$$\begin{aligned} x < -2 &\rightarrow -2x-1+x+3 & -x+2 > 0 &\rightarrow x < 2 \\ -3 < x < -\frac{1}{2} &\rightarrow -2x-1-x-3 & -2x-4 > 0 &\rightarrow x < -2 \\ \frac{1}{2} < x &\rightarrow 2x+1-x-3 & x > 2 \end{aligned}$$

$$D = \mathbb{R} - (-\infty, -2] \cup [2, +\infty)$$

$$2x-1 > 0 \rightarrow 2x > 1 \quad x > \frac{1}{2}$$

$$\log_{\frac{1}{2}} \log_{\frac{1}{2}} (2x-1) > 0 \rightarrow 0 < \log_{\frac{1}{2}} (2x-1) \leq 1$$

$$\begin{aligned} 2x-1 > 1 &\rightarrow 2x > 2 \rightarrow x > 1 \\ 2x-1 > 0 &\rightarrow 2x > 1 \rightarrow x > \frac{1}{2} \end{aligned}$$

(1, 2]

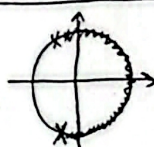
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$$y = \log(r \cos \pi + 1)$$

$$r \cos \pi > 0$$

$$\begin{aligned} r \cos \pi + 1 &> 0 \\ r \cos \pi &> -1 \\ \cos \pi &> -\frac{1}{r} \end{aligned}$$



انتخاب از میان این دو می‌کنیم!

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

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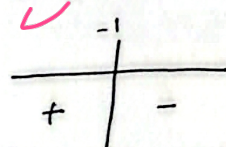
$$\frac{x-1}{x+1} \geq 1$$

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

راه مناس!

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

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



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(۳) عبارت مخرج باید صاف باشد!

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

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

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

عبارت زیر را سیمال نامتناهی است!

$$x - x^2 \geq 0 \rightarrow x^2 \leq x \rightarrow -2 \leq x \leq 2$$

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

دامنه شامل ۵ عدد صحیح است!

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

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

$\Delta < 0$ همیشه ندارد

(۵-ب) $y = \frac{C \cdot \sin}{r_C \cdot \sin - 1} \rightarrow r_C \cdot \sin - 1 \neq 0 \rightarrow \sin \neq \frac{1}{r}$

$D_f = \mathbb{R} - \left\{ rkn \pm \frac{\pi}{r} \right\}$

(۶-ب) $\frac{n-1}{n+1} > 0 \rightarrow n > 1 \leq n < -1$

$\log_{\frac{n+1}{n-1}} \geq 0 \rightarrow \frac{n-1}{n+1} \geq (1.0) \rightarrow \frac{n-1}{n+1} \geq 1 \rightarrow \frac{n-1}{n+1} - 1 \geq 0 \rightarrow \frac{n-1-n-1}{n+1} \geq 0 \rightarrow \frac{-2}{n+1} \geq 0$

$n+1 < 0 \rightarrow n < -1 \rightarrow D_f = (-\infty, -1)$

(الف-۷) $r_C \cdot \sin + 1 > 0 \rightarrow \sin > -\frac{1}{r}$

$D_f = \left(rkn - \frac{\pi}{r}, rkn + \frac{\pi}{r} \right)$