

۲. آخرین سؤال

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سینا فاضلی

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معادله $\rightarrow 0.2 = 0 \rightarrow a = 2$
باید درجه ۱ باشد

$y = \sqrt{2x+b} \rightarrow 2 \times 3 + b = 0$ P

$\Delta \leq 0 \quad 4 - 4(2 - m^2) \leq 0$

$4 - 4 + 4m^2 \leq 0 \rightarrow 4m^2 - 4 \leq 0$

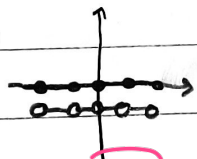
$m^2 - 1 \leq 0 \rightarrow m \in [-1, 1]$

۱. $(-1) = \text{P}$ P

$4 - x^2 \geq 0$

$x^2 \leq 4 \rightarrow x \in [-2, 2]$ (I)

$[x] + [-x] \neq -1 \quad x \in \mathbb{Z} \quad (II)$



$(I) \cap (II) \rightarrow x \in \{-2, -1, 0, 1, 2\}$

$x \in \{-2, -1, 0, 1, 2\}$

الف) $x^3 + 3x^2 \geq 0 \rightarrow x^2(x+3) \geq 0$

$\frac{x^2}{x^2 + 3x} \geq 0$

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

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

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

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



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$$1) \text{الف) } |x-2| - 3 > 0 \leadsto |x-2| > 3 \leadsto x-2 > 3 \leadsto x > 5 \quad (I)$$

$$2) \cup (II)$$

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

$$x-2 \leq -3 \leadsto x \leq -1 \quad (II)$$

$$3) \text{ب) } 4 - |2-x| > 0 \leadsto |2-x| < 4$$

$$-4 < 2-x < 4 \leadsto -6 < -x < 2$$

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

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

$$4) \text{الف) } |x-1| > 0 \leadsto |x-1| < 1 \quad \text{ب) } x > 0 \leadsto x^2 < 1$$

$$10) \text{ب) } x > 0 \leadsto -x^2 < 1$$

$$\leadsto -1 < x < 1$$

$$11) \quad x^2 > -1 \leadsto x \in (-\infty, 0] \quad (II)$$

$$\leadsto 0 < x < 1 \quad (I)$$

$$12) (I) \cup (II) \leadsto D = (-1, 1]$$

$$13) \text{ب) } 3 - |x-0| > 0 \leadsto |x-0| < 3 \leadsto -3 < x-0 < 3$$

$$-3 < x < 3 \quad (I)$$

$$15) \quad 3 - |x-0| \neq 1$$

$$16) \quad -1 < x-0 < 3$$

$$17) \quad |x-0| \neq 2 \leadsto x-0 \neq 2 \leadsto x \neq 2 \quad (II)$$

$$x-0 \neq -2 \leadsto x \neq -2$$

$$18) (I) \cap (II) \leadsto D = [-3, 3] - \{-2, 2\}$$

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الف) $\cos u \neq 0$

$$D = \{R - \frac{1}{2}k\pi + \frac{\pi}{2}\}$$

-V



ب) $2(\cos u - 1) \neq 0 \leadsto \cos u \neq \frac{1}{2}$

$$D = \{R - \frac{1}{2}k\pi + \frac{\pi}{3}, k\pi - \frac{\pi}{3}\}$$



ج) $|2u+1| - |u+3| \neq 0 \leadsto |2u+1| \neq |u+3|$

-A

$$\{u^2 + 4u + 1 \neq u^2 + 6u + 9 \leadsto 2u^2 - 2u - 8 \neq 0$$

$$u^2 - 2u - 4 \leadsto (u-2)(u+2) \leadsto \begin{matrix} u=2 \\ u=-2 \end{matrix}$$

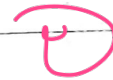
$$D = \{R - \frac{1}{2}k\pi + \frac{\pi}{2}\}$$

د) $|2u+1| > |u+3|$

$$\{u^2 + 4u + 1 > u^2 + 6u + 9 \leadsto 2u^2 - 2u - 8 > 0$$

$$\begin{matrix} -\frac{2}{2} & 2 \\ + & - & + \end{matrix}$$

$$D = \{R - (-\frac{\pi}{2}, 2)\}$$



$$2u-1 > 0$$

-9

$$u > \frac{1}{2} \quad (I)$$

$$\log_a^{2u-1} > 0 \leadsto 2u-1 > 1 \leadsto u > 1 \quad (II)$$

$$\log_a^{\log_a^{2u-1}} > 0 \rightarrow \log_a^{2u-1} < 1$$

$$\begin{matrix} 2u-1 \leq 0 \\ 2u \leq 1 \\ 2u \leq \frac{1}{2} \end{matrix}$$

$$D = \{R - \frac{1}{2}k\pi + \frac{\pi}{2}\}$$

$$D = \{R - \frac{1}{2}k\pi + \frac{\pi}{2}\}$$

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$$1) 2(\cos x + 1) > 0$$

$$2(\cos x) > -1 \leadsto (\cos x) > -\frac{1}{2}$$



$$D = \left(2k\pi - \frac{2\pi}{3}, 2k\pi + \frac{2\pi}{3} \right)$$

$$2) \frac{x-1}{x+1} > 0 \leadsto \frac{-1}{1} < \frac{x}{x+1} < \frac{1}{1} \quad (-\infty, -1) \cup [1, +\infty) \quad (I)$$

$$\log_{10} \frac{x-1}{x+1} > 0 \rightarrow \frac{x-1}{x+1} > 1 \leadsto \frac{x-1}{x+1} - \frac{x+1}{x+1} > 0$$

$$\frac{-2}{x+1} > 0 \leadsto \frac{-1}{x+1} > 0 \quad (-\infty, -1) \quad (II)$$

$$(I) \cap (II) \leadsto D = (-\infty, -1)$$