

$$\text{محل } \rightarrow 0 - 2 = 0 \rightarrow a = 2$$

باید دو بار باشد

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

$$b = -6$$

$$\Delta \leq 0$$

$$4 - 4(1 - m^2) \leq 0$$

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

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

$$\rightarrow m \in [-1, 1]$$

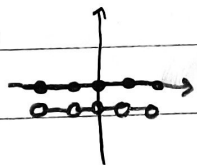
$$1 - (-1) = 2$$

$$4 - x^2 \geq 0$$

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

$$[x] + [-x] \neq -1$$

$$x \in \mathbb{Z} \quad (II)$$



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

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

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

$$\frac{-3}{-1} = 3$$

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

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

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

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



SUBJECT:
Year:

SUBJECT:

Year: Month: Day:

Page: ()

$$(الف) |x-2| > 3 \rightarrow |x-2| > 3 \sim x-2 > 3 \sim x > 5 \quad (I)$$

$$(II) \cup (I)$$

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

$$x-2 < -3 \sim x < -1 \quad (II)$$

$$(ب) 4 - |2-x| > 0 \rightarrow |2-x| < 4$$

$$-4 \leq 2-x \leq 4 \sim -6 \leq -x \leq 2$$

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

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

$$(الف) |x| > 0 \rightarrow |x| < 1 \quad (I)$$

$$|x| < 1 \rightarrow -1 < x < 1$$

$$|x| > 1 \rightarrow x \in (-\infty, -1] \cup [1, +\infty) \quad (II)$$

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

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

$$(ب) 3 - |x-0| > 0 \rightarrow |x-0| < 3 \rightarrow -3 < x-0 < 3$$

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

$$3 - |x-0| \neq 1$$

$$|x-0| \neq 2$$

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

$$|x-0| \neq 2 \rightarrow x-0 \neq -2 \rightarrow x \neq -2$$

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

SUBJECT:

Year: Month: Day:

Page: ()

الف) $\cos u \neq 0$

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

-V



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

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



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

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

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

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

$$(I) \cap (II) \cap (III)$$

$$D = (1, 3)$$

$$2u-1 \leq 0$$

$$2u \leq 1$$

$$u \leq \frac{1}{2} \quad (III)$$

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Page: ()

SUBJECT:

Year:

Month:

Day:

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

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



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

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

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

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

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