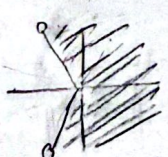


$a - 2(9) + 12a + b = 0$ $9a - 18 + 12a + b = 0$ $12a - 18 + b = 0$ $b = 18 - 12a$ $\sqrt{(a-2)x^2 + ax + 18 - 12a}$ $a = 2$ $f(x) = \sqrt{2x + 18 - 24}$ $f(x) = \sqrt{2x - 6}$ $b = -6$	1
$x^2 + 2x + 2 - m^2 \geq 0$ $(x+1)^2 + 1 - m^2 \geq 0$ $\bullet \text{ min}$ $\hookrightarrow 1 - m^2 \geq 0$ $m^2 \leq 1$ $-1 \leq m \leq 1$ $\max m = 1$ $\min m = -1$ $1 - (-1) = 2$	2
$x - x^2 \geq 0$ $x \geq x^2$ $-2 \leq x \leq 2 \quad (I)$ $[x] + [-x] + 1 \neq 0$ $[x] + [-x] \neq -1$ $\mathbb{R} \quad D: x \in \mathbb{Z}$ $D: \{-2, -1, 0, 1, 2\} \rightarrow \text{مجموعه مقادیر}$	3
$الف) x^2 + 3x^2 \geq 0$ $x^2(x+3) \geq 0$ $x = 0, -3$ $\begin{array}{c} -3 \quad 0 \quad + \\ - \quad + \quad + \end{array}$ $D: [-3, +\infty)$ $ب) \frac{(x^2-1)(x^2(x-3))}{x^2-1} \geq 0$ $x = \pm 1 \quad x = 0 \quad x = 3 \quad x \neq 1$ $\begin{array}{c} -1 \quad 0 \quad 1 \quad 3 \\ + \quad - \quad - \quad + \end{array}$ $(-\infty, -1] \cup [3, +\infty) \cup \{0\}$	4
$الف) x-2 - 3 \geq 0$ $ x-2 \geq 3$ $x-2 \geq 3 \quad \vee \quad x-2 \leq -3$ $x \geq 5 \quad \vee \quad x \leq -1$ $[5, +\infty) \cup (-\infty, -1]$ $ب) x - 2-x \geq 0$ $x \geq 2-x $ $-x \leq 2-x \leq x$ $-y \leq -x \leq y$ $-2 \leq x \leq 2$ $D: [-2, 2]$	5

الف) $1 - x x \geq 0$ $1 \geq x x$ $x = +1, \dots, -1, -2, \dots \checkmark$ $D: (-\infty, 1]$	ب) $1 - x-\omega \geq 0$ $1 \geq x-\omega$ $-1 \leq x-\omega \leq 1$ $-1 \leq x \leq 1$ $D: [-1, 1] - \{0, \omega\}$	$\sqrt{1 - x-\omega } - 1 \neq 0$ $\sqrt{1 - x-\omega } \neq 1$ $1 - x-\omega \neq 1$ $x-\omega \neq 0$ $x - \omega \neq 0 \Rightarrow x \neq \omega$ $x \neq \omega$	6
الف) $\cos \neq 0$  $D: \mathbb{R} - \{k\pi + \frac{\pi}{2}\}$	ب) $r \cos - 1 \neq 0$ $r \cos \neq 1$ $\cos \neq \frac{1}{r}$  $D: \mathbb{R} - \{rk\pi \pm \frac{\pi}{r}\}$		7
الف) $rx+1 - x+1 \neq 0$ $rx+1 \neq x+1$ $rx+1 \neq x+1$ $x \neq r$ $rx \neq x$ $x \neq -\frac{x}{r}$ $D: \mathbb{R} - \{-\frac{x}{r}, r\}$	ب) $rx+1 - x+1 \geq 0$ $rx+1 \geq x+1$ $rx+1 \geq x+1$ $x \geq r$ $D: [r, +\infty) \cup (-\infty, -\frac{1}{r}]$		8
$\log_{0.5} \log_{\omega} (rx-1) \geq 0$ $rx-1 \geq 0$ $x \geq \frac{1}{r} \text{ (I)}$	$\log_{\omega} (rx-1) \leq (\frac{1}{r})'$ $\log_{\omega} (rx-1) \leq 1$ $rx-1 \leq \omega$ $x \leq \frac{\omega+1}{r} \text{ (II)}$	$D: (\frac{1}{r}, \frac{\omega+1}{r}]$	9
الف) $r \cos + 1 > 0$ $\cos > -\frac{1}{r}$  $D: \mathbb{R} - (rk\pi + \frac{r\pi}{r}, rk\pi + \frac{r\pi}{r})$	ب) $\log \frac{x-1}{x+1} \geq 0$ $\frac{x-1}{x+1} \geq 1$ $\frac{x-1-x-1}{x+1} \geq 0$ $\frac{-2}{x+1} \geq 0$ $x+1 < 0$ $x < -1 \Rightarrow (-\infty, -1)$	$\frac{x-1}{x+1} > 0$ $x \neq 1, -1$ $(-\infty, -1) \cup (1, +\infty)$ $D: (-\infty, -1)$	10