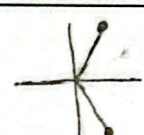
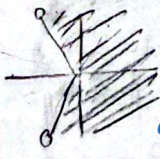


$a - 2(9) + 12a + b = 0$ $9a - 18 + 12a + b = 0$ $12a - 18 + b = 0$ $b = 18 - 12a$ $\sqrt{(a-2)x^2 + ax + 18 - 12a}$ $a = 2$ $f(x) = \sqrt{2x + 18 - 24}$ $f(x) = \sqrt{2x - 6}$ $b = \boxed{6}$	۱
$x^2 + 2x + 2 - m^2 \geq 0$ $(x+1)^2 + 1 - m^2 \geq 0$ $\bullet \text{ min}$ $\hookrightarrow 1 - m^2 \geq 0$ $m^2 \leq 1$ $-1 \leq m \leq 1$ $\max m = 1$ $\min m = -1$ $1 - (-1)^2 = \boxed{0}$	۲
$x - x^2 \geq 0$ $x \geq x^2$ $-2 \leq x \leq 2 \quad (I)$ $[x] + [-x] + 1 \neq 0$ $[x] + [-x] \neq -1$ $\mathbb{R} \quad D: x \in \mathbb{Z}$ $D: \{-2, -1, 0, 1, 2\} \rightarrow \text{اعداد صحیح}$	۳
$(الف) \quad x^2 + 3x^2 \geq 0$ $x^2(x+3) \geq 0$ $x = 0, -3$ $\begin{array}{c} -3 \quad 0 \\ \hline - \quad + \quad + \end{array}$ $D: [-3, +\infty)$ $(ب) \quad \frac{(x^2-1)(x^2(x-3))}{x^2-1} \geq 0$ $x = \pm 1, x = 0, x = 3, x \neq 1$ $\begin{array}{c} -1 \quad 0 \quad 1 \quad 3 \\ \hline + \quad - \quad - \quad + \end{array}$ $(-\infty, -1] \cup [3, +\infty) \cup \{0\}$	۴
$(الف) \quad x-2 - 3 \geq 0$ $ x-2 \geq 3$ $x-2 \geq 3 \quad \vee \quad x-2 \leq -3$ $x \geq 5 \quad \vee \quad x \leq -1$ $[5, +\infty) \cup (-\infty, -1]$ $(ب) \quad x - 2-x \geq 0$ $x \geq 2-x $ $-4 \leq 2-x \leq 4$ $-6 \leq -x \leq 2$ $-2 \leq x \leq 4$ $D: [-2, 4]$	۵

الف) $1 - x x \geq 0$ $1 \geq x x$ $x = +1, 0, -1, -2, \dots$ $D: (-\infty, 1]$	ب) $3 - x-2 \geq 0$ $3 \geq x-2$ $-3 \leq x-2 \leq 3$ $1 \leq x \leq 5$ $D: [1, 5]$	$\sqrt{3- x-2 } - 1 \neq 0$ $\sqrt{3- x-2 } \neq 1$ $3- x-2 \neq 1$ $x-2 \neq 2$ $x-2 \neq \pm 2$ $x \neq 4$ $x \neq 0$	6
الف) $\cos \neq 0$  $D: \mathbb{R} - \{k\pi + \frac{\pi}{2}\}$	ب) $x \cos - 1 \neq 0$ $x \cos \neq 1$ $\cos \neq \frac{1}{x}$  $D: \mathbb{R} - \{k\pi \pm \frac{\pi}{2}\}$		7
الف) $x+1 - x+2 \neq 0$ $x+1 \neq x+2$ $x+1 \neq x+2$ $x \neq 1$ $x+1 \neq -(x+2)$ $2x \neq -3$ $x \neq -\frac{3}{2}$ $D: \mathbb{R} - \{-\frac{3}{2}, 1\}$	ب) $x+1 - x+2 \geq 0$ $x+1 \geq x+2$ $x+1 \geq x+2$ $x \geq 1$ $x+1 \geq -(x+2)$ $2x \geq -3$ $x \geq -\frac{3}{2}$ $D: [1, +\infty) \cup (-\infty, \frac{3}{2}]$		8
$\log_{0.5}(\log_{0.5}(x-1)) \geq 0$ $\log_{0.5}(x-1) \leq 1$ $x-1 \geq 0.5$ $x \geq 1.5$ (I) $\log_{0.5}(x-1) \geq 0$ $x-1 \leq 1$ $x \leq 2$ (II) $D: (1.5, 2]$	$\log_{0.5}(x-1) \leq (\frac{1}{2})$ $\log_{0.5}(x-1) \leq 1$ $x-1 \leq 0.5$ $x \leq 1.5$ $D: (1, 1.5]$	$\log_{0.5}(\log_{0.5}(x-1)) \geq 0 \rightarrow x-1 > 0.5 \rightarrow x > 1.5$	9
الف) $x \cos + 1 > 0$ $\cos > -\frac{1}{x}$  $D: \mathbb{R} - (2k\pi + \frac{\pi}{2}, 2k\pi + \frac{3\pi}{2})$	ب) $\log \frac{x-1}{x+1} \geq 0$ $\frac{x-1}{x+1} \geq 1$ $\frac{x-1-x-1}{x+1} \geq 0$ $\frac{-2}{x+1} \geq 0$ $x+1 < 0$ $x < -1$	$\frac{x-1}{x+1} > 0$ $\frac{-1}{x+1} > 0$ $x+1 < 0$ $x < -1$ $D: (-\infty, -1)$	10

$$\mathbb{R} - [2k\pi + \frac{\pi}{2}, 2k\pi + \frac{3\pi}{2}]$$

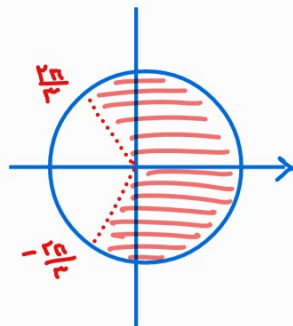
$$9) \log_{\frac{1}{5}} \log_5^{r_{n-1}} \rightarrow r_{n-1} > 0 \rightarrow \boxed{n > \frac{1}{2}}$$

$$\log_5^{r_{n-1}} > 0 \rightarrow r_{n-1} > 0 \rightarrow r_{n-1} > 1 \rightarrow \boxed{n > 1}$$

$$\log_{\frac{1}{5}} \log_5^{r_{n-1}} \geq 0 \xrightarrow[\text{مناسبت!}]{\text{من بابین دورا}} \log_5^{r_{n-1}} \leq \frac{1}{5} \rightarrow \log_5^{r_{n-1}} \leq 1 \rightarrow r_{n-1} \leq 5 \rightarrow r_n \leq 4 \rightarrow \boxed{n \leq 3}$$

$$\hookrightarrow D_f = (1, 3]$$

$$(الف - د) \quad 2C \cdot \sin + 1 > 0 \rightarrow C \cdot \sin > -\frac{1}{2}$$



$$\rightarrow D_f = (2k\pi - \frac{\pi}{6}, 2k\pi + \frac{\pi}{6})$$