

$$F = \{(1, 4a), (1, a^2 + 3), (2, 3a)\}$$

$$fa \leq a^2 + 3$$

$$a^2 - 4a + 3 \geq 0$$

$$(a-1)(a-3) \geq 0$$

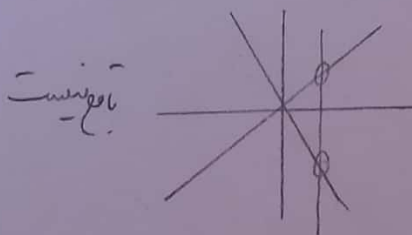
$$a-1 \geq 0$$

$$a \geq 1$$

$$a-3 \geq 0$$

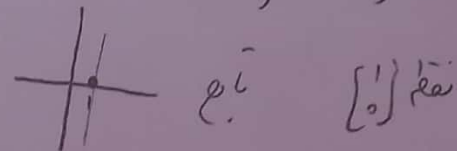
$$a \geq 3$$

$$|y| \leq |x| \quad \text{الف)}$$



$$\sqrt{x-1} + |y| \leq 0 \quad \text{ب)}$$

$$|y| \leq 0$$



$$\begin{aligned} & \text{الف)} \quad |y-1| \leq \sqrt{x-1} \\ & |y-1| \leq \sqrt{1} \\ & y-1 \leq 1 \quad \text{تابع} \\ & y \leq 2 \quad \text{نیست} \\ & y-1 \geq -1 \\ & y \geq 0 \end{aligned}$$

$$\begin{aligned} & \text{ب)} \quad y^2 - y \leq \frac{x^2}{2} \\ & y^2 - y \leq 0 \\ & y(y-1) \leq 0 \end{aligned}$$

$$\begin{aligned} & \text{ج)} \quad \sin^2 x + \cos^2 y \leq \frac{1}{2} \\ & 0 + \cos^2 y \leq \frac{1}{2} \\ & \cos^2 y \leq \frac{1}{2} \\ & \cos y = \pm \frac{1}{\sqrt{2}} \\ & \text{تابع نیست} \end{aligned}$$

$$\begin{aligned} & \text{د)} \quad x^2 y \leq 2 \\ & 0 \leq 0 \\ & \text{بازای } x=0 \text{ هر مقدار} \\ & y \text{ درست است} \\ & \text{تابع نیست} \\ & -1, -2, 3, 4, \dots \end{aligned}$$

$$\begin{aligned} & \text{الف)} \quad \frac{1}{x^2} + |y-1| \leq 4 \\ & 1 + |y-1| \leq 4 \\ & |y-1| \leq 3 \\ & y-1 \leq 3 \quad y \leq 4 \\ & y-1 \geq -3 \quad y \geq -2 \end{aligned}$$

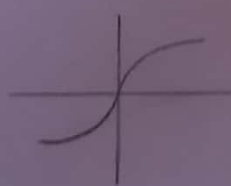
$$\text{ب)} \quad y^2 + 3x \leq 0$$

$$\begin{aligned} & (x_1, y_1) \in F \\ & (x_2, y_2) \in F \\ & \frac{x_1 x_2}{y_1 y_2} \leq 0 \\ & \frac{y_1^2 + 3x_1}{y_2^2 + 3x_2} \leq 0 \\ & \text{تابع} \end{aligned}$$

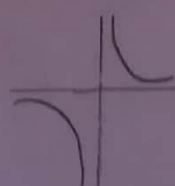
$$\text{الف)} \quad y \leq \sqrt{x}$$



$$\text{ب)} \quad y \leq \sqrt{x}$$

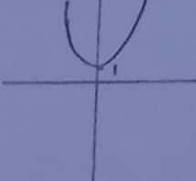
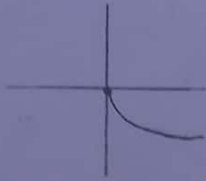
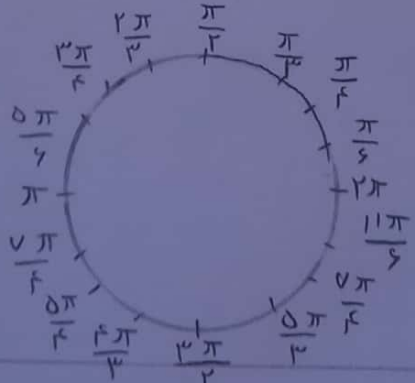


$$\text{ج)} \quad y \leq \frac{1}{x^2}$$



$$\text{د)} \quad y \leq \frac{1}{x^2}$$



الف) $y = (n-1)^2$	ب) $y = (n+2)^2$	ج) $y = n^2 - 2$	د) $y = n^2 + 1$	٦
				
الف) $y = \sqrt{n}$	ب) $y = \sqrt{-n}$	ج) $y = -\sqrt{n}$	د) $y = -\sqrt{n+2}$	٧
				
				٨
				٩
الف) $\cos 120^\circ = -\frac{1}{2}$	ج) $\cos \frac{5\pi}{3} = \frac{1}{2}$			١٠
ب) $\sin 150^\circ = \frac{1}{2}$	د) $\sin \frac{11\pi}{6} = -\frac{1}{2}$			