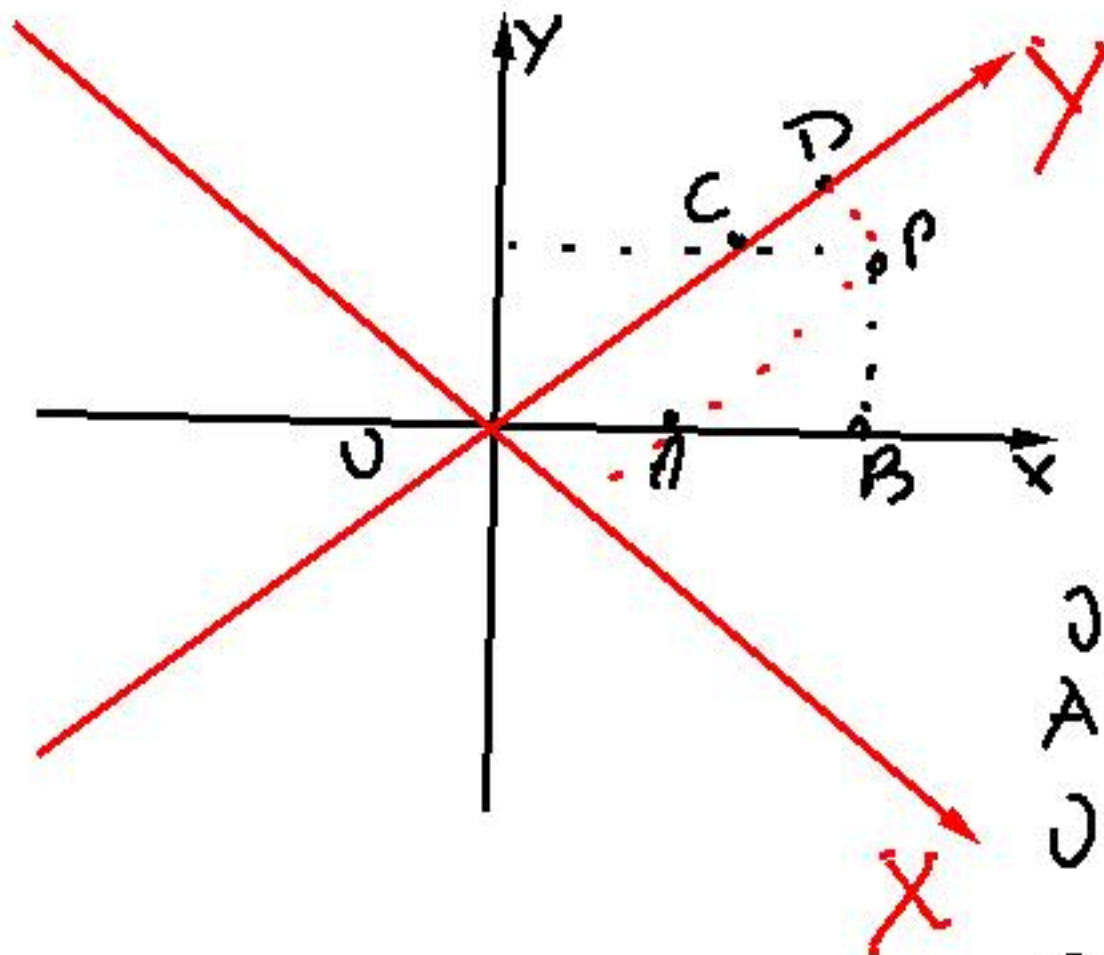


$$\begin{cases} p_x = \frac{\sqrt{2}}{2} X \\ y = \frac{\sqrt{2}}{2} X + \frac{\sqrt{2}}{2} Y \end{cases}$$



$$P(x, y)$$

$$(\underline{x}, \underline{y})$$

$$OA = \sqrt{2} X$$

$$AB = Y$$

$$OC = \sqrt{2} X$$

$$CD = X$$

$$y = -\sqrt{x^2 - 1} \quad x^2 - 1 \geq 0 \quad x < -1 \cup x > 1$$

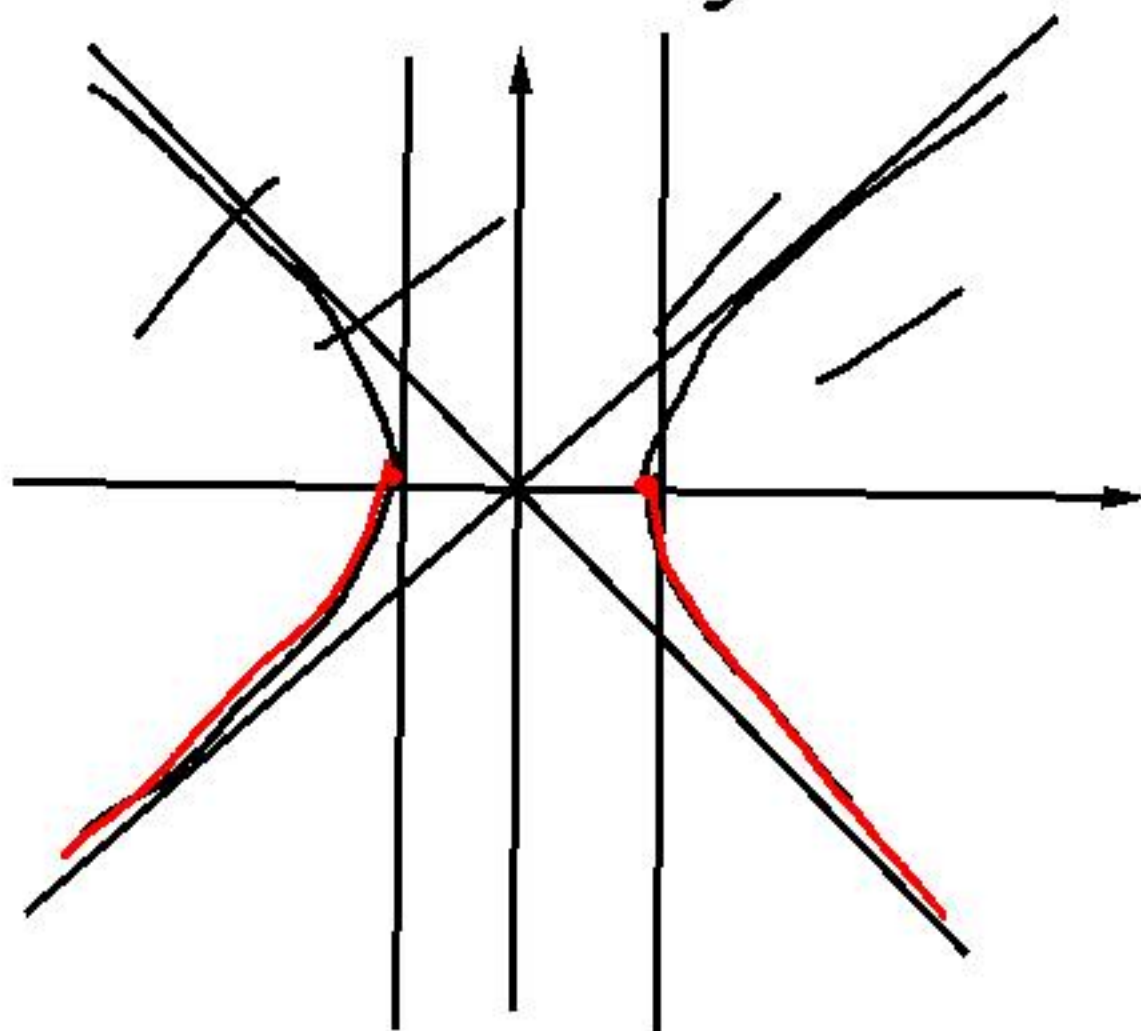
$$\begin{cases} y < 0 \\ (y)^2 = (\sqrt{x^2 - 1})^2 \end{cases}$$

$$\begin{cases} y < 0 \end{cases}$$

$$\begin{cases} y^2 = x^2 - 1 \end{cases}$$

X

$$y^2 - x^2 = -1 \quad x^2 - y^2 = 1$$



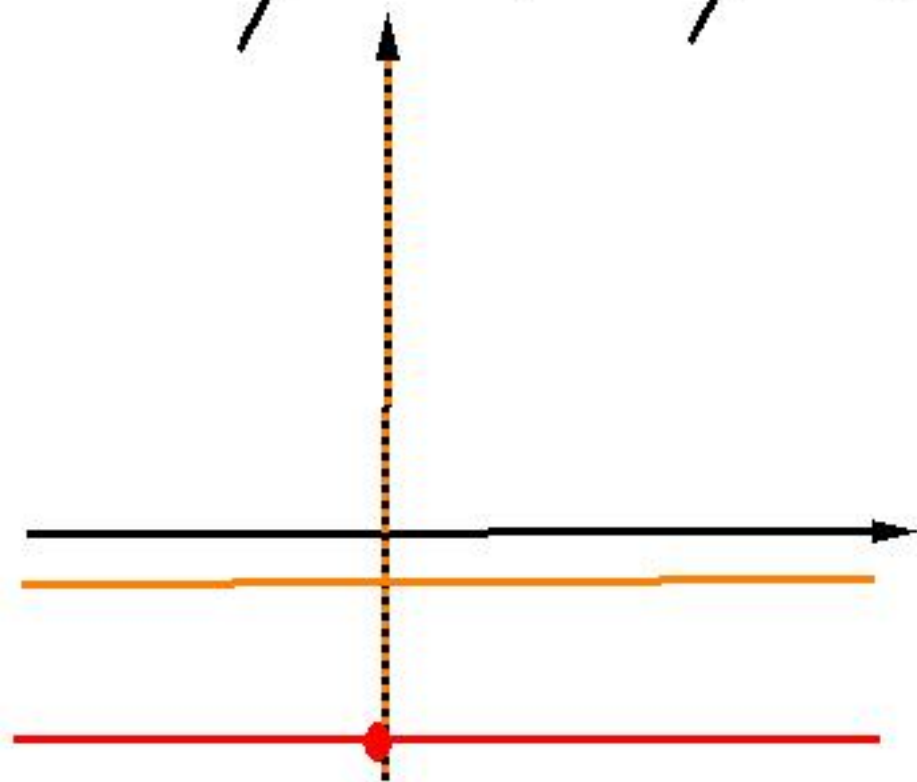
$$\frac{y=2-kx}{2kx-1} - \frac{2kx-1}{-(2kx-1)} = \frac{2-kx-2+kx}{-(2kx-1)} = \frac{0}{-(2kx-1)} = 0$$

$$k \neq 0$$

$$k \in \mathbb{R}_0$$

$$(2kx-1)y = 2-kx$$

$$2kxy + kx = y + 2$$



$$g: 2xy + x = 0$$

$$g: y = -2$$

$$x(2y+1) = 0$$

$$x = 0 \vee y = -\frac{1}{2}$$

$$x^2(b^2 - m^2a^2) = a^2$$

$$\begin{cases} y = mx \\ \frac{x^2}{a^2} - \frac{y^2}{b^2} = 1 \end{cases}$$

$$\frac{b}{a} < m < \frac{b}{a}$$

$$\frac{x^2}{a^2} - \frac{(mx)^2}{b^2} = 1$$

$$x^2 \left(\frac{1}{a^2} - \frac{m^2}{b^2} \right) = 1 + \frac{m^2x^2}{b^2}$$

$$x^2 \left(\frac{b^2 - m^2a^2}{a^2b^2} \right) = \frac{b^2 + m^2x^2}{b^2}$$

