

$$x^2 - \frac{y^2}{2} = 1$$

$$y = \pm \frac{\sqrt{2}}{1} x$$

$$c^2 = a^2 + b^2$$

$$c^2 = 1 + 2$$

$$c = \sqrt{3}$$

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

$$u^2 - \frac{y^2}{2} = 1 \quad \frac{2u^2 - y^2}{2} = 2$$

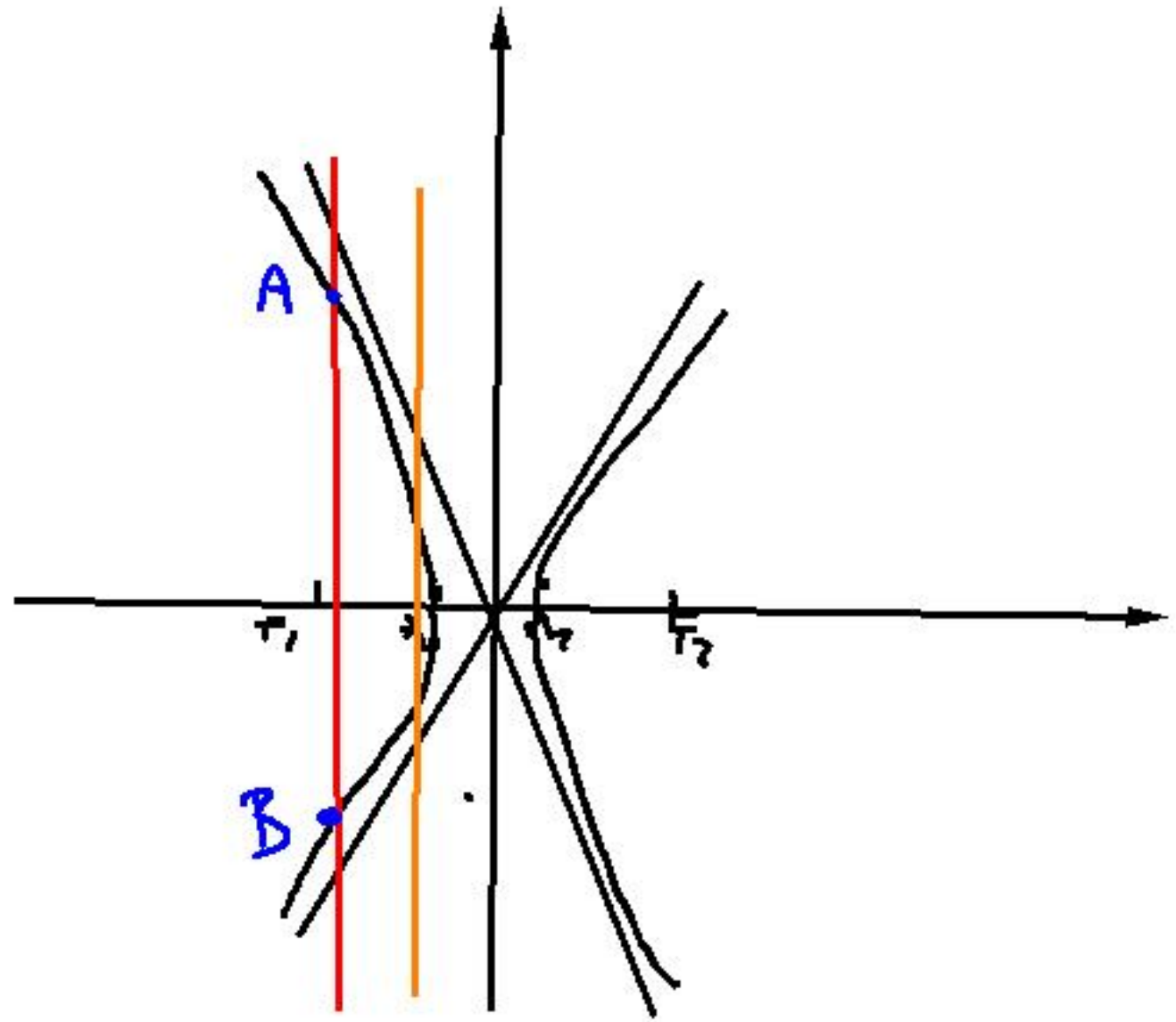
$$-y^2 + 2u^2 - 2 = 0$$

$$y^2 = 2u^2 - 2$$

$$y = \pm \sqrt{2u^2 - 2}$$

$$\overline{AB} = 2\sqrt{2u^2 - 2} = \sqrt{2}$$

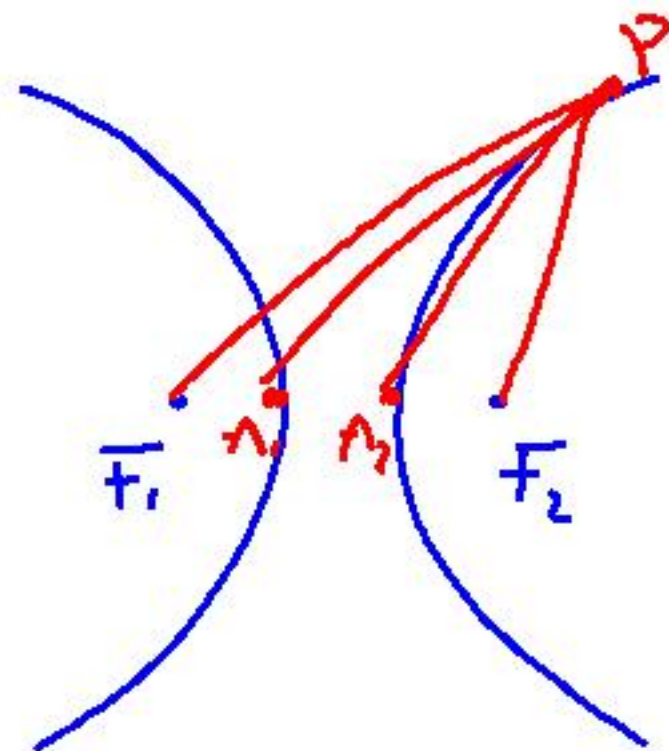
$$\begin{cases} 4(u^2 - 1) = 2 \\ 4u^2 - 5 = 0 \end{cases}$$

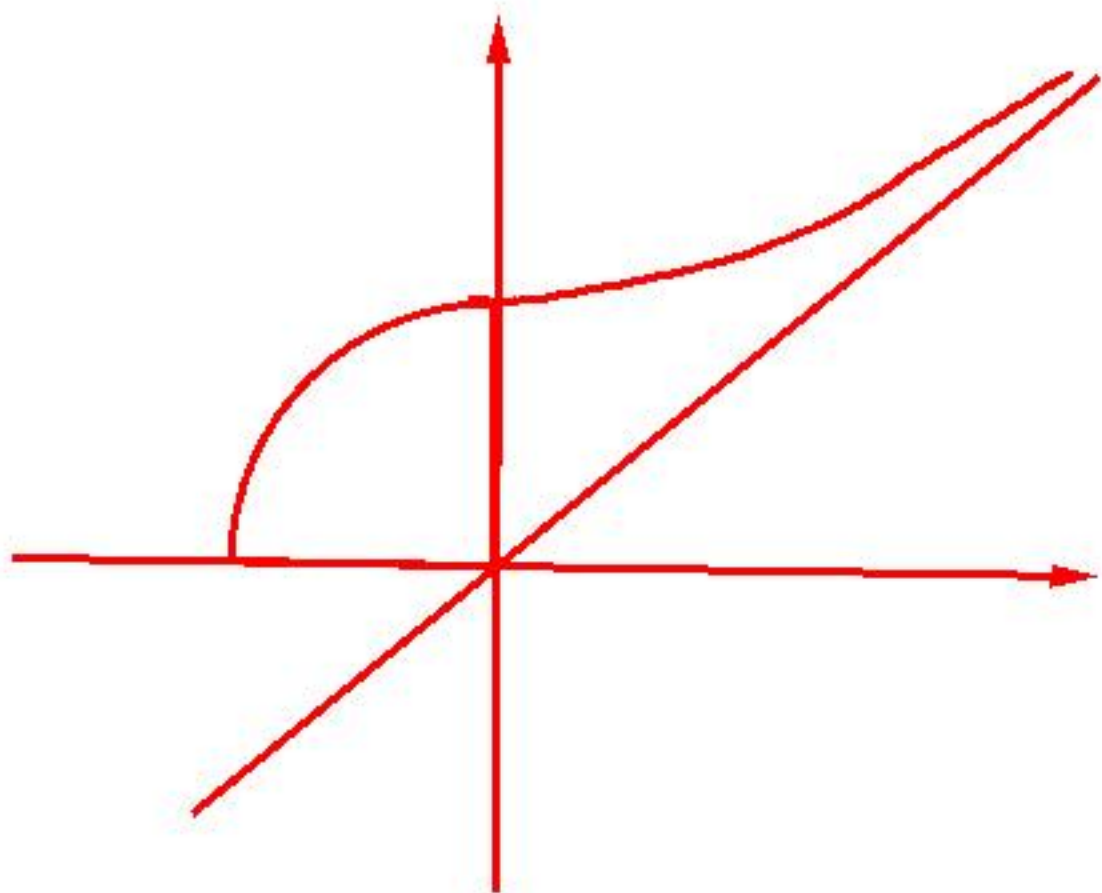


$$P(x, y) \quad F_{1,2}(\pm c, 0)$$

$$|PF_1 - PF_2| = 2a$$

$$\overline{PF_1} - \overline{PF_2} = 2a$$





$$D: [-1; \infty[$$

$$\begin{cases} 1 + |x|x \geq 0 \\ x^2 + 1 \geq 0 \\ \forall x \in \mathbb{R} \\ x \geq 0 \end{cases}$$

$$-x^2 - 1 \geq 0$$

$$\Delta = +4$$

$$x_1 = \frac{-2}{2} = -1$$

$$x_2 = \frac{-2}{2} = -1$$



$$\begin{cases} -1 < x < 1 \\ x < 0 \end{cases}$$

$$y = \sqrt{1 + |x|x}$$

$$(y \geq 0)$$

$$y^2 = 1 + |x|x$$

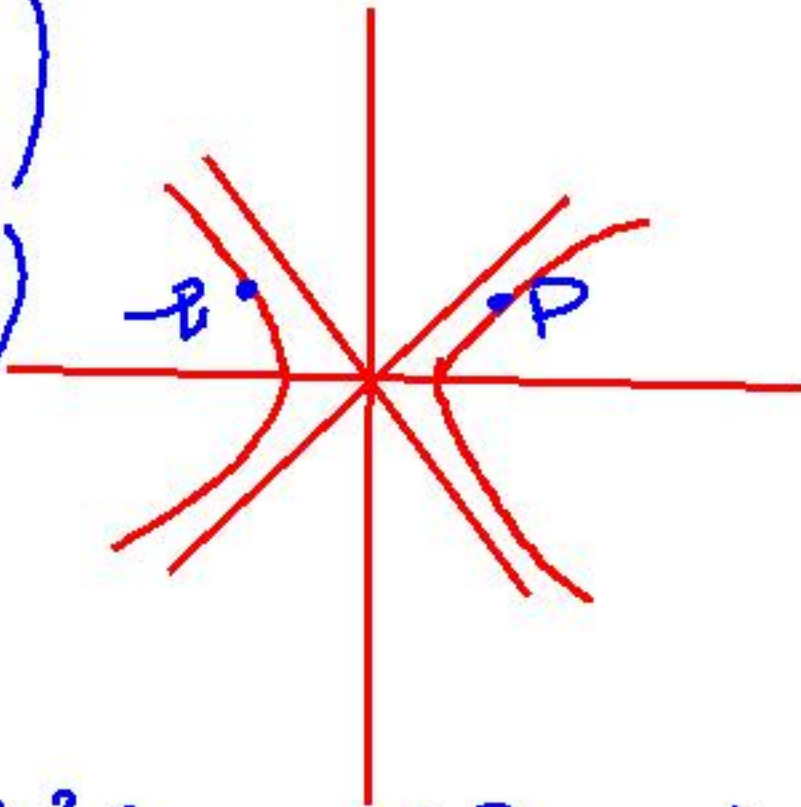
$$\begin{cases} y^2 = x^2 + 1 & x^2 - y^2 = -1 \\ x \geq 0 & x > 0 \end{cases}$$

$$\begin{cases} y^2 = -x^2 + 1 & x^2 + y^2 = 1 \\ x < 0 \end{cases}$$

$$\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1$$

$P(x; y)$

$P(-x; y)$



$$\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1$$

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

$$\frac{b^2 x^2 - a^2 y^2 = a^2 b^2}{a^2 b^2}$$

$$b^2 x^2 = a^2 b^2 + a^2 y^2$$
$$x^2 = \frac{a^2 b^2}{b^2} + \frac{a^2 y^2}{b^2}$$
$$x^2 - a^2 = \frac{a^2 y^2}{b^2}$$

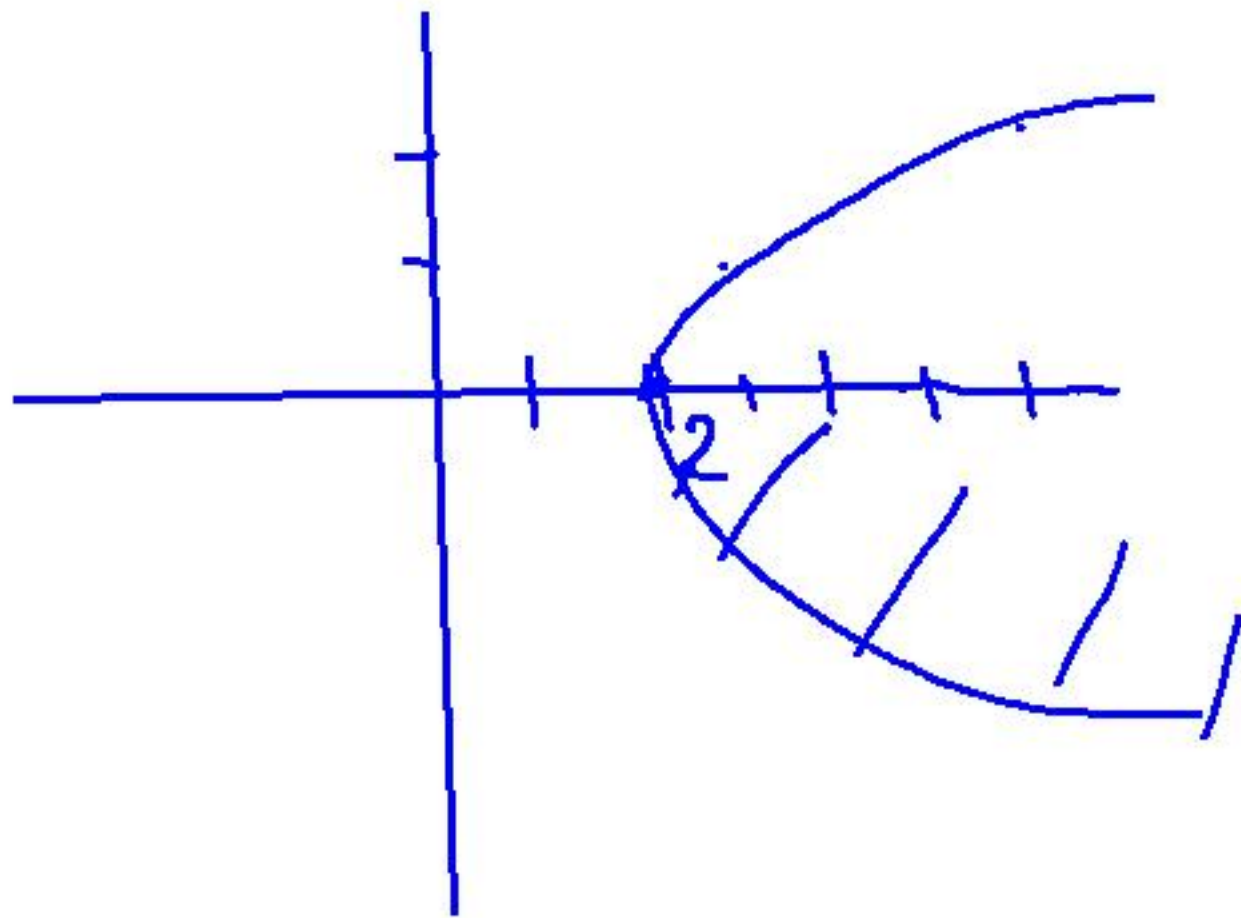
$$\boxed{x \leq -a \vee x \geq a}$$

$$y = \sqrt{x-2}$$

$$x-2 \geq 0 \quad x \geq 2$$

$$\begin{cases} y \geq 0 \\ y^2 = x-2 \end{cases} \quad \begin{cases} y \geq 0 \\ x = y^2 + 2 \end{cases}$$

$$V\left(\frac{-\Delta}{4a}, \frac{-b}{2a}\right) = \rightarrow (2; 0)$$



x	y
3	1
6	2

