

n°8

$$64x^2 + y^2 - 4 = 0$$

$$y - 2 = m\left(x - \frac{1}{2}\right) \quad y = mx - \frac{1}{2}m + 2$$

P($\frac{1}{2}$; 2)

$$64x^2 + \left(mx - \frac{1}{2}m + 2\right)^2 - 4 = 0$$

$$64x^2 + m^2x^2 + \frac{1}{4}m^2 + 4 - m^2x - 2m + 4mx - 4 = 0$$

$$x^2(64 + m^2) + x(4m - m^2) + \left(\frac{1}{4}m^2 - 2m\right) = 0$$

$$\frac{\Delta}{4} = \left(\frac{b}{2}\right)^2 - ac$$

$$\frac{(4m - m^2)^2}{4} - (64 + m^2)\left(\frac{1}{4}m^2 - 2m\right) = 0$$

$$\frac{16m^2 + m^4 - 8m^3}{4} - \left(16m^2 - 128m + \frac{1}{4}m^4 - 2m^3\right) = 0$$

$$16m^2 + m^4 - 8m^3 - 64m^2 + 512m - m^4 + 8m^3 = 0$$

$$-48m^2 + 512m = 0$$

$$m_1 = \frac{32}{3} \quad m_2 = 0$$

$$\left[y = \frac{32}{3}x - \frac{10}{3} \right] \quad \left[y = 2 \right]$$

Puntos intersección.

$$64x^2 + (2)^2 - 4 = 0$$

$$\begin{cases} x = 0 \\ y = 2 \end{cases}$$

A(0; 2)

$$64x^2 + \left(\frac{32}{3}x - \frac{10}{3}\right)^2 - 4 = 0$$

$$64x^2 + \frac{1024}{9}x^2 - \frac{640}{9}x + \frac{100}{9} - 4 = 0$$

$$\frac{1600}{9}x^2 - \frac{640}{9}x + \frac{64}{9} = 0$$

$$x = \frac{1}{3}$$

$$y = \frac{6}{3}$$

$$y = -\frac{6}{3}$$

B($\frac{1}{3}$; $\frac{6}{3}$)