

Fórmulas de cónicas (elipse, hipérbola y parábola)

Elipse

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1 \quad a^2 = b^2 + c^2$$

Semieje mayor = a

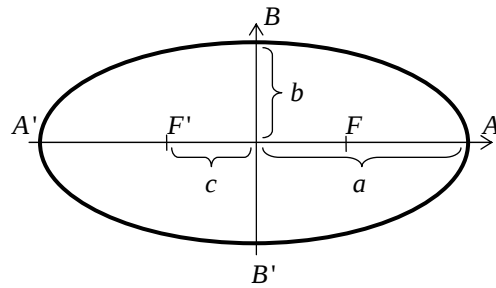
Semieje menor = b

Semidistancia focal = c

Excentricidad $e = \frac{c}{a}$, $e < 1$

Vértices $A'(-a, 0)$, $A(a, 0)$, $B'(0, -b)$, $B(0, b)$

Focos $F'(-c, 0)$, $F(c, 0)$



Hipérbola

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

Semieje = a

Semidistancia focal = c

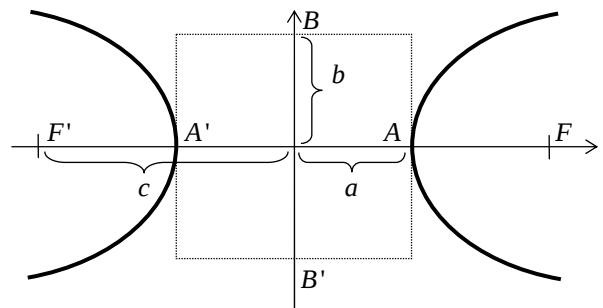
Excentricidad $e = \frac{c}{a}$, $e > 1$

Vértices reales $A'(-a, 0)$, $A(a, 0)$

Vértices imaginarios $B'(0, -b)$, $B(0, b)$

Focos: $F'(-c, 0)$, $F(c, 0)$

Asíntotas: $y = \pm \frac{b}{a}x$



Parábola

$$y^2 = 2px$$

Vértice: $V(0, 0)$

Directriz $x = -\frac{p}{2}$

Foco $F\left(\frac{p}{2}, 0\right)$

