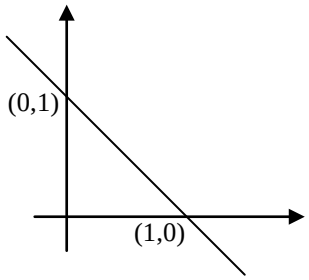
KURBA ERABILIENAK $\mathbb{R}^2$ ESPAZIOAN

Zuzenak: $Ax+By=C$ motako ekuazioa da, $A, B, C \in \mathbb{R}$ izanik.

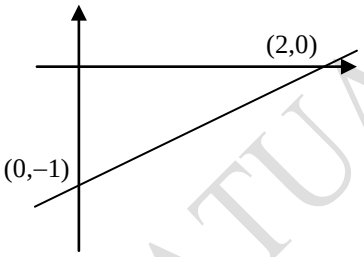
Edo $y = mx + b$ (m zuzenaren malda da eta b ordenatu-ardatza zuzenak ebakitzen duen puntua da).

Adibideak:

$y = -x + 1$



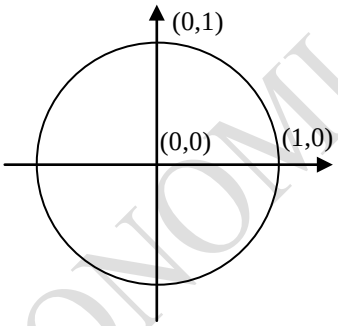
$y = \frac{x}{2} - 1$



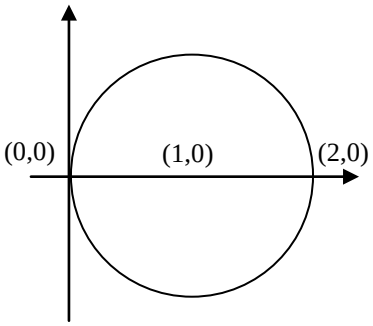
Zirkunferentziak: $(x - x_0)^2 + (y - y_0)^2 = r^2$, zentroa (x_0, y_0) eta erradioa $r>0$ izanik.

Adibideak:

$x^2 + y^2 = 1$

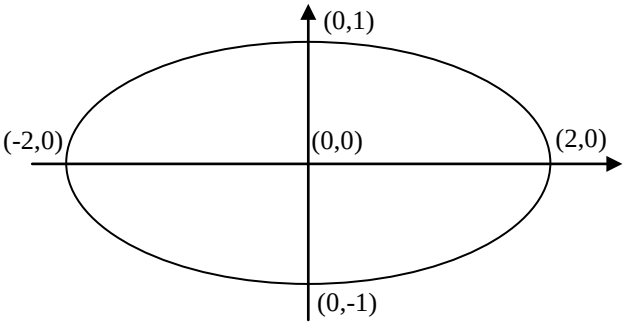


$(x-1)^2 + y^2 = 1$

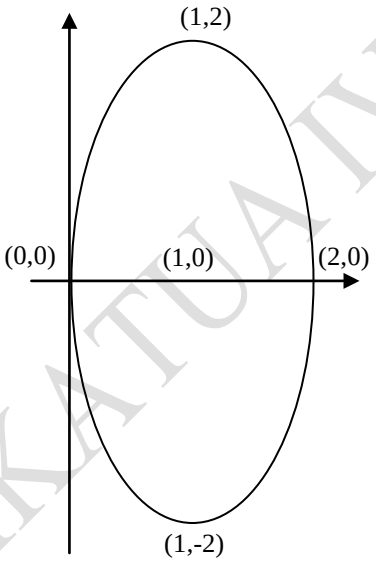


Elipseak: $\frac{(x-x_0)^2}{a^2}+\frac{(y-y_0)^2}{b^2}=1$, zentroa (x_0, y_0) eta *0X* ardatzean erradioa *a* eta *0Y* ardatzean erradioa *b* izanik.

$\frac{x^2}{4}+y^2=1$



$(x-1)^2+\frac{y^2}{4}=1$



Parabolak: Simetri ardatz bertikala duten parabolak: $y=Ax^2+Bx+C$.

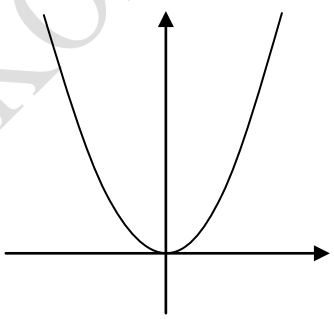
Erpina: (x_0, y_0): $x_0=-\frac{B}{2A}$ eta $y_0=Ax_0^2+Bx_0+C$.

Edo simetri ardatz horizontala duten parabolak: $x=Ay^2+By+C$.

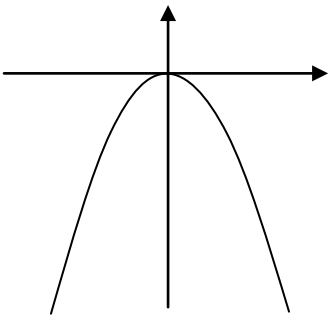
Erpina: (x_0, y_0): $y_0=-\frac{B}{2A}$ eta $x_0=Ay_0^2+By_0+C$.

Adibideak:

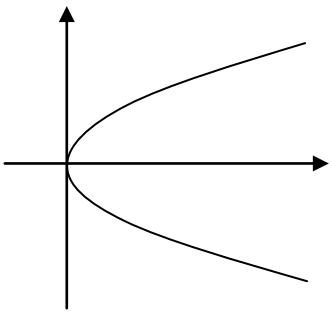
$y=x^2$



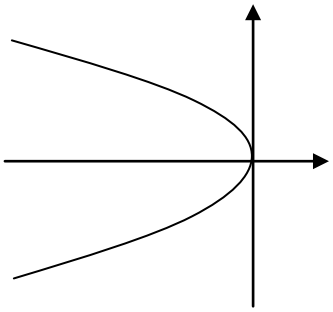
$y=-x^2$



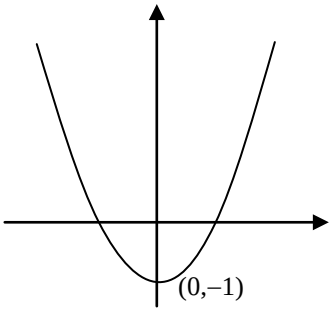
$x = y^2$



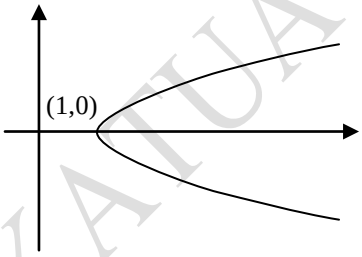
$x = -y^2$



$x^2 = y + 1$



$x - 1 = 2y^2$



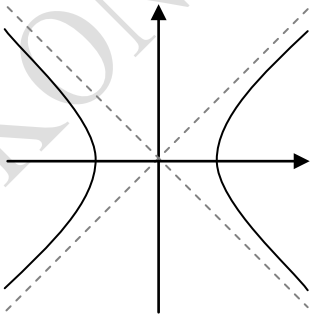
Hiperbolak: $\frac{x^2}{a^2} - \frac{y^2}{b^2} = k$, $(0,0)$ puntuan zentratuak. Hiperbola erabilienak honako hauek dira:

$x^2 - y^2 = (x+y)(x-y) = k$, (0,0) puntuan zentratua eta asintotak $x + y = 0$ eta $x - y = 0$ izanik.

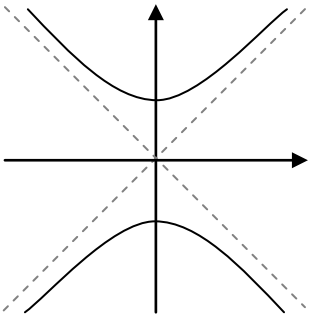
$xy = k$ edo $x^2 y = k$ edo $xy^2 = k$ edo $x^2 y^2 = k$, (0,0) puntuan zentratua eta asintotak $x = 0$ eta $y = 0$ izanik.

Adibideak:

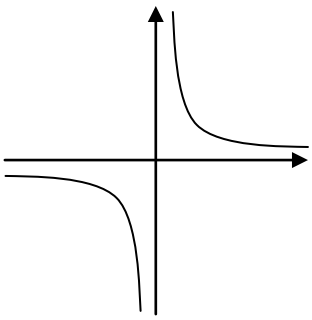
$x^2 - y^2 = 1$



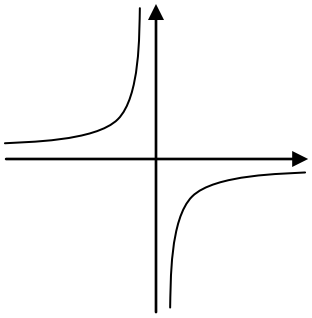
$x^2 - y^2 = -1$



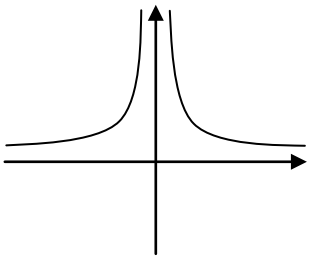
$xy = 1$



$xy = -1$



$x^2 y = 1$



$x^2 y^2 = 1$