

| Elipse | Centro | Vértice | Foco | Ecuación |
|------------------------------------|---------------|-----------------------------|------------------------------|-------------------------------------------------|
| Horizontal a>b | C(0,0) | V(a ; 0) V'(-a ; 0) | F(c ; 0) F'(-c ; 0) | $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$ |
| | C(h,k) | V(h+a ; k) V'(h-a ; k) | F(h+c ; k) F'(h-c ; k) | $\frac{(x-h)^2}{a^2} + \frac{(y-k)^2}{b^2} = 1$ |
| Vertical b>a | C(0,0) | V(0 ; a) V'(0 ; -a) | F(0 ; c) F'(0 ; -c) | $\frac{x^2}{b^2} + \frac{y^2}{a^2} = 1$ |
| | C(h,k) | V(h ; k+a) V'(h ; k-a) | F(h ; k+c) F'(h ; k-c) | $\frac{(x-h)^2}{b^2} + \frac{(y-k)^2}{a^2} = 1$ |

| | | |
|-------------------|-------------------------------------|----------------------------------------------|
| $a^2 = b^2 + c^2$ | Lado recto $LR = \frac{2b^2}{a}$ | Exentricidad $e = \frac{c}{a}$ $e < 1$ |
|-------------------|-------------------------------------|----------------------------------------------|

| Hipérbola | Centro | Vértice | Foco | Ecuación | Asíntota |
|------------------------------------|---------------|------------------------------|------------------------------|-------------------------------------------------|----------------------------------|
| Horizontal a>b | C(0,0) | V(a ; 0) V'(-a ; 0) | F(c ; 0) F'(-c ; 0) | $\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1$ | $y = \pm \frac{b}{a}x$ |
| | C(h,k) | V(h+a ; k) V'(h-a ; k) | F(h+c ; k) F'(h-c ; k) | $\frac{(x-h)^2}{a^2} - \frac{(y-k)^2}{b^2} = 1$ | $y - k = \pm \frac{b}{a}(x - h)$ |
| Vertical b>a | C(0,0) | V(0 ; a) V'(0 ; -a) | F(0 ; c) F'(0 ; -c) | $\frac{y^2}{a^2} - \frac{x^2}{b^2} = 1$ | $y = \pm \frac{a}{b}x$ |
| | C(h,k) | V(h ; k+a) V'(h ; k-a) | F(h ; k+c) F'(h ; k-c) | $\frac{(y-k)^2}{a^2} - \frac{(x-h)^2}{b^2} = 1$ | $y - k = \pm \frac{a}{b}(x - h)$ |

| | | |
|-------------------|-------------------------------------|----------------------------------------------|
| $c^2 = a^2 + b^2$ | Lado recto $LR = \frac{2b^2}{a}$ | Exentricidad $e = \frac{c}{a}$ $e < 1$ |
|-------------------|-------------------------------------|----------------------------------------------|

| Parábola | Directriz | Vértice | Foco | Ecuación | Eje de simetría |
|------------------------------------|------------------|----------------|-------------|---------------------|------------------------|
| Horizontal a>b | $x=-a$ | $V(0; 0)$ | $F(a; 0)$ | $y^2 = 4ax$ | $y=0$ |
| | $x=h-a$ | $V(h; k)$ | $F(h+a; k)$ | $(y-k)^2 = 4a(x-h)$ | $y=k$ |
| Vertical b>a | $y=-a$ | $V(0; 0)$ | $F(0; a)$ | $x^2 = 4ay$ | $x=0$ |
| | $y=k-a$ | $V(h; k)$ | $F(h; k+a)$ | $(x-h)^2 = 4a(y-k)$ | $x=h$ |

