$x^2 = 4ay$	$(0,0)$	$+ve\ Y-axis$	$(0,a)$	$4a$	$y+a=0$	$(\pm 2a, a)$
$x^2 = -4ay$	$(0,0)$	$-ve\ Y-axis$	$(0,-a)$	$4a$	$y-a=0$	$(\pm 2a, -a)$
$(y-\beta)^2 = 4a(x-\alpha)$	(α,β)	$\parallel X-axis$	$(a+\alpha,\beta)$	$4a$	$x+a=\alpha$	$(\alpha+a, \beta\pm 2a)$
$(x-\alpha)^2 = 4a(y-\beta)$	(α,β)	$\parallel Y-axis$	$(\alpha, a+\beta)$	$4a$	$y+a=\beta$	$(\alpha\pm 2a, \beta+a)$

(1) $The\ parabola\ x = ay^2 + by + c\ (a \neq 0)\ is\ \parallel to\ X-axis$

(2) $The\ parabola\ y = px^2 + qx + r\ (p \neq 0)\ is\ \parallel to\ Y-axis$

(3) $The\ parametric\ of\ y^2 = 4ax\ is\ (at^2, 2at)$

(4) $The\ position\ of\ a\ point\ P(x_1,y_1)\ w.r.t\ y^2 = 4ax$

$If\ {y_1}^2 - 4ax_1 > 0, then\ outside\ the\ parabola$

$= 0, then\ on\ the\ parabola$

$< 0, then\ inside\ the\ parabola$

(5) $The\ equation\ of\ tangent\ of\ the\ parabola\ y^2 = 4ax\ at\ P(x_1,y_1)\ is$

$yy_1 = 2a(x + x_1)$.

(6) $The\ equation\ of\ normal\ of\ the\ parabola\ y^2 = 4ax\ at\ P(x_1,y_1)\ is$

$y_1(x - x_1) + 2a(y - y_1) = 0$.

Ellipse

(1) $If\ P(x,y)\ be\ a\ point\ on\ the\ foci\ S\ \&\ S',\ then\ SP = a - ex; S'P = a + ex; SP + S'P = 2a.$

(2) $The\ equation\ of\ auxiliary\ circle\ of\ \frac{x^2}{a^2} + \frac{y^2}{b^2} = 1\ (a^2 > b^2)\ is\ x^2 + y^2 = a^2.$

(3) $Any\ point\ on\ the\ ellipse\ \frac{x^2}{a^2} + \frac{y^2}{b^2} = 1\ (a^2 > b^2)\ is\ (a\cos\theta, b\sin\theta)$.

(4) $The\ position\ of\ a\ point\ P(x_1,y_1)\ w.r.t\ the\ ellipse\ \frac{x^2}{a^2} + \frac{y^2}{b^2} = 1\ (a^2 > b^2)$

$If\ \frac{{x_1}^2}{a^2} + \frac{{y_1}^2}{b^2} - 1 > 0$, $then\ outside\ the\ ellipse$

$= 0$, $then\ on\ the\ ellipse$

< 0 , $then\ inside\ the\ ellipse$

(5) $The\ equation\ of\ tangent\ of\ the\ ellipse\ \frac{x^2}{a^2} + \frac{y^2}{b^2} = 1\ at\ P(x_1,y_1)\ is$

$\frac{xx_1}{a^2} + \frac{yy_1}{b^2} = 1$.

(6) $The\ equation\ of\ normal\ of\ the\ ellipse\ \frac{x^2}{a^2} + \frac{y^2}{b^2} = 1\ at\ P(x_1,y_1)\ is$

$b^2x_1(y - y_1) = a^2y_1(x - x_1)$.

Form	$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1\ (a^2 > b^2)$	$\frac{x^2}{b^2} + \frac{y^2}{a^2} = 1\ (a^2 > b^2)$	$\frac{(x-\alpha)^2}{a^2} + \frac{(y-\beta)^2}{b^2} = 1\ (a^2 > b^2)$	$\frac{(x-\alpha)^2}{b^2} + \frac{(y-\beta)^2}{a^2} = 1\ (a^2 > b^2)$
Centre	$(0,0)$	$(0,0)$	(α,β)	(α,β)