

Circle through Co-normal points.

Equation of the circle passing through the three (co-normal) points on the parabola $y^2 = 4ax$, normal at which pass through a given point (α, β) ; is $x^2 + y^2 - (2a + \alpha)x - \frac{\beta}{2}y = 0$

- (1) The algebraic sum of the ordinates of the four points of intersection of a circle and a parabola is zero.
- (2) The common chords of a circle and a parabola are in pairs, equally inclined to the axis of parabola.
- (3) The circle through co-normal points passes through the vertex of the parabola.
- (4) The centroid of four points; in which a circle intersects a parabola, lies on the axis of the parabola.