## Point of intersection of normals at any two points on the Parabola.

If $R$ is the point of intersection then point of intersection of normals at any two points
$P\left(a t_{1}^{2}, 2 a t_{1}\right)$ and $Q\left(a t_{2}^{2}, 2 a t_{2}\right)$ on the parabola $y^{2}=4 a x$ is $R\left[2 a+a\left(t_{1}^{2}+t_{2}^{2}+t_{1} t_{2}\right),-a t_{1} t_{2}\left(t_{1}+t_{2}\right)\right]$


