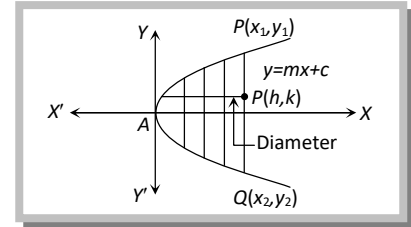


## Diameter of a Parabola.

The locus of the middle points of a system of parallel chords is called a diameter and in case of a parabola this diameter is shown to be a straight line which is parallel to the axis of the parabola.

The equation of the diameter bisecting chords of the parabola  $y^2 = 4ax$  of

slope  $m$  is  $y = \frac{2a}{m}x$



Note: Every diameter of a parabola is parallel to its axis.

The tangent at the end point of a diameter is parallel to corresponding system of parallel chords.

The tangents at the ends of any chord meet on the diameter which bisects the chord.