Engineering Drawing

Anup Ghosh



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Conic Sections





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Conic Sections



- An ellipse ⇒ Section plane AA, inclined to the axis cuts all the generators of the cone.
- A parabola ⇒ Section plane
 BB, parallel to one of the generators cuts the cone.
- 3 A hyperbola ⇒ Section plane CC, inclined to the axis cuts the cone on one side of the axis.
- A rectangular hyperbola ⇒
 Section plane DD, parallel to the axis cuts the cone.

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Directrix and focus

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Parabola in Parrallelogram

Follow similar process.



Hyperbola for a given eccentricity

Follow similar process.



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Draw the axes OA, OB and

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Length of an arc subtending an angle less than 60^0 and length of circumference.



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- **1** Let P is the generating point and PA is the circumference of the circle.
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The normal at any point on a cycloidal curve will pass through the corresponding point of contact between the generating circle and the directing line or circle.



Trochoid Curves

curve generated by a point fixed to a circle, within or outside its circumference, as the circle rolls along a straight line. Point within the circle = inferior trochoid, Point outside the circle = superior trochoid,

1 Process is similar to the previous. We need to extend the lines C_1P_1 , C_2P_2 , ... and cut the appropriate lengths like radius R_1 or R_2 from the lines.



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- 5 With diameter CN describe a semicircle to find tangent point M.

