14
The Conic Sections

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Set the slit horizontally on the OHP and put the double cone in its path. Slowly rotate the slit to produce the following in turn:

1. when the slit is horizontal: the circle.

2. when the slit is inclined: the ellipse.

3. when the plane of section is parallel to a cone generator: the parabola.

4. When the plane of section cuts both the upper and the lower cone: the hyperbola.

When the slit is vertical, translate it to produce a pair of lines as the limiting case of the hyperbola.

*Compare **13**.*

Paraboloid
Parabola
Hyperbola
Line
Hyperboloid
Ellipse
Hyperbolic paraboloid
Sphere
Line pair
Cone
Sine curve
Cylinder
Tractrix
Circle
Exponential curve
Line family
Catenary
Loxodrome
Catenoid
Helix
Equiangular spiral
Helicoid
Archimedean spiral
Plane
Tiling
Polygon
Polyhedron