

# Conic Section

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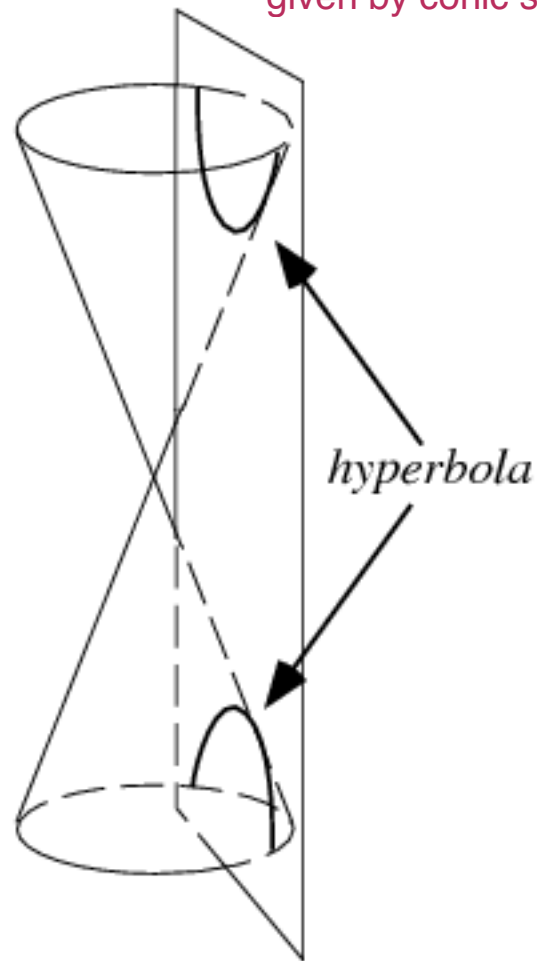
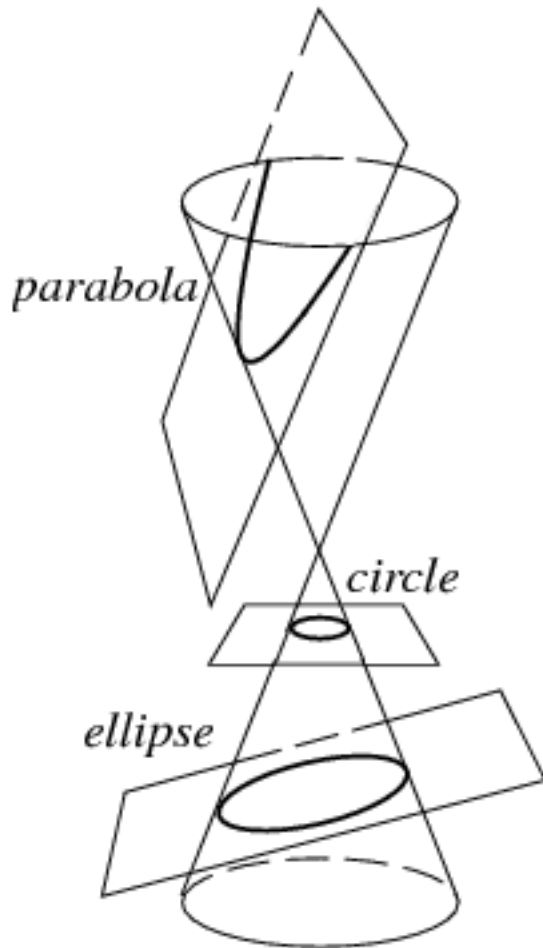


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All bodies acting under Newtonian gravity follow trajectories or orbits given by conic sections!



The conic sections are the nondegenerate curves generated by the intersections of a **plane** with one or two **nappes** of a **cone**. For a **plane** perpendicular to the axis of the **cone**, a circle is produced. For a **plane** that is not perpendicular to the axis and that **intersects** only a single nappe, the curve produced is either an **ellipse** or a **parabola** (Hilbert and Cohn-Vossen 1999, p. 8). The curve produced by a **plane intersecting** both **nappes** is a **hyperbola** (Hilbert and Cohn-Vossen 1999, pp. 8-9).

The **ellipse** and **hyperbola** are known as **central conics**.