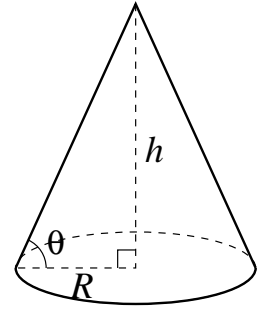


CONIC SECTIONS

PHYS 2303, Saint Mary's University

D. A. Clarke, November 2019

Consider a *right cone* (cone apex situated directly over centre of base) with height h , base radius R , and angle of inclination given by $\tan \theta = h/R$.



A conic section is the locus of points along the intersection of a plane inclined to the horizontal at an angle ϕ :

- a) for $\phi = 0$, the conic section is a circle;
- b) for $0 < \phi < \theta$, the conic section is an ellipse;
- c) for $\phi = \theta$, the conic section is a parabola;
- d) for $\phi > \theta$, the conic section is an hyperbola.

See App. C in F&C for a more formal description.

