



$$\sin \beta = \frac{h}{r_i}$$

$$h = r_i \cdot \sin \beta$$

$$\cos \beta = \frac{x}{r_i}$$

$$x = r_i \cdot \cos \beta$$

$$y = r_i + \frac{a}{2} - x$$

$$y^2 + h^2 = e^2$$