$$d = \sqrt{\left(x_2 - x_1\right)^2 + \left(y_2 - y_1\right)^2}$$

$$F_g = \frac{G M_1 m_2}{R^2}$$

$$F_c = m_2 a \quad a = \frac{v^2}{R} \quad \Rightarrow \quad \frac{m_2 v^2}{R}$$

$$F_g = F_c \quad \Rightarrow \quad v = \sqrt{\frac{G M_1}{R}}$$

$$\sin \beta = \frac{o}{h} \quad \cos \alpha = \frac{a}{h} \quad \tan \varphi = \frac{o}{a}$$

https://www.youtube.com/watch?v=ed_wZLHvBaI