

Gravitation Prelab

Due start of class, week of Nov 18

Name: _____ Section: _____

One can write the equation of an ellipse with the origin at a focus as

$$r = r_0 \frac{1 + e}{1 + e \cos \theta}$$

where e is the eccentricity of the ellipse. In the context of planetary orbits, write expressions for the perihelion distance, R_p , and aphelion distance, R_a in terms of r_0 and e .

Now write the equations for R_p and R_a in terms of e and a , the semimajor axis length of the ellipse.