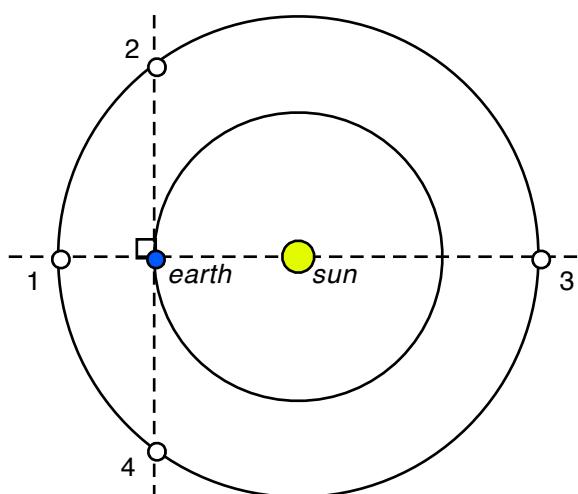


## Orbital Definitions

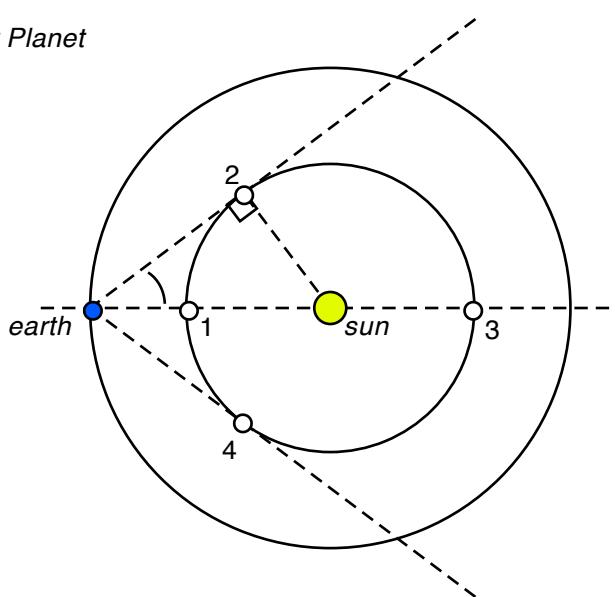
### Key Orbital Positions of Planets

*Superior Planet*



1. opposition
2. quadrature
3. conjunction
4. quadrature

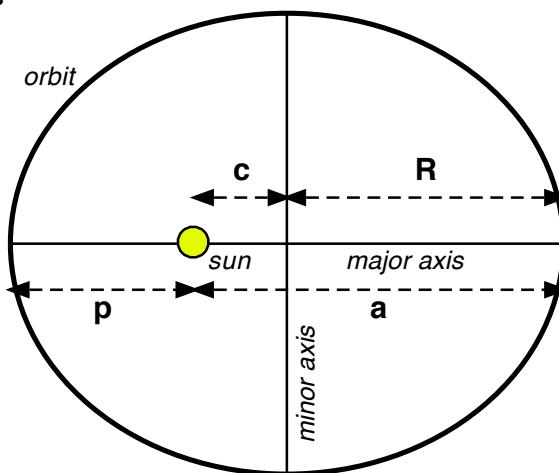
*Inferior Planet*



1. inferior conjunction
2. greatest elongation
3. superior conjunction
4. greatest elongation

### Elliptical Orbits

$$\begin{aligned} e &= c / R \\ p &= R - c \\ a &= R + c \end{aligned}$$



*R*: semi-major axis  
*p*: perihelion  
*a*: aphelion  
*c*: center  
*e*: eccentricity