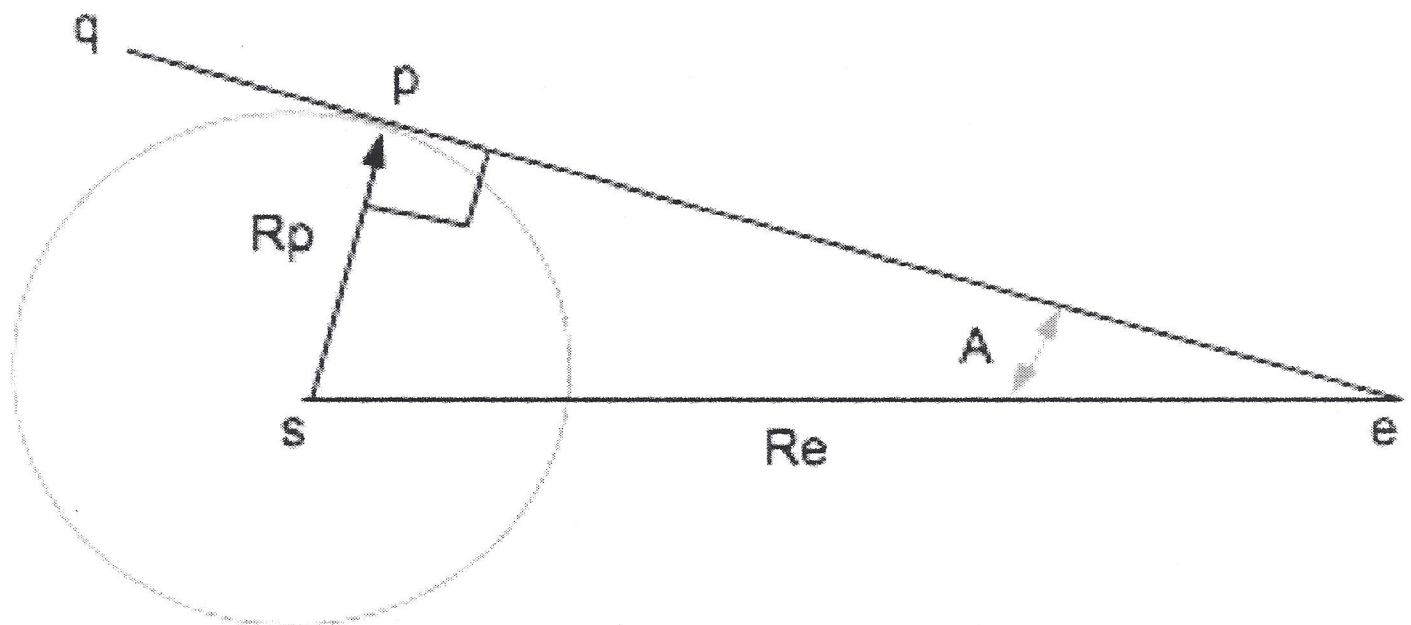


Copernicus's model for the inner planets



From the Copernican heliocentric model we can predict the ratio of the planets' orbital radii to the earth's orbital radius using simple geometrical information.

For an inner planet draw a radius of the earth of $R_e = 10$ cm.

1) For Mercury use an angle $A = 23$ degrees and draw the line eq.

2) With the sun as the center of a circle draw a circle which just touches the line eq. The radius of this circle is R_{mercury} .

3) Find the ratio R_{mercury}/R_e .

Do the same drawing for Venus but use $A = 46$ degrees.

Find the ratio R_{venus}/R_e .