

4. Continuing to assume the heliocentric theory is true, some scientists (perhaps to ensure continued government funding) have calculated that the average distance from the Earth to the Sun is 149.5 million kilometers or 93 million miles. **Show all work.**

a. What is the distance to Earth travels in one year?

i. In kilometers:

ii. In miles:

b. Using the distances you calculated above, calculate the Earth's velocity as it orbits the sun (use the number of days in a Gregorian year, i.e. 1 year = 365.2422 days). **Show all work.**

i. In km/hr:

ii. In km/second: