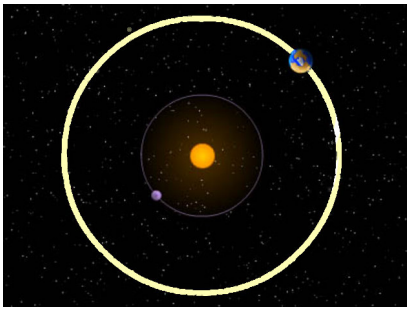
MAT123, Paper Homework 2
due in recitation the week of 9/12

1. If we assume the orbit of the Earth is circular with the sun at the center (the orbit is elliptical, but it is pretty close to circular), how far (in millions of miles) will the Earth travel during the month of September 2015? Use the fact that the distance from the Earth to the sun is 92.956 million miles, that the Earth orbits the sun once every 365.24 days, and that it moves at a constant speed. Explain how you got your answer.



2. Find all values of θ with $0 \leq \theta < 2\pi$ for which $(\cos\theta + \sin\theta)^2 = 1$.