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16.346 Astrodynamics
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Exercises 26

A target satellite is in a circular orbit of the earth at an altitude of 200 miles. The space shuttle is four miles behind, i.e., $x_0 = -4$ and $y_0 = 0$.

1. If the time to rendezvous is $\tau_{\text{go}} = \frac{9}{2}\pi$, plot the path of the shuttle relative to the satellite in the xy plane.
2. Find the magnitude and direction of the initial and final Δv 's to accomplish the maneuver.
3. Determine the rendezvous time in hours and in orbital revolutions.

