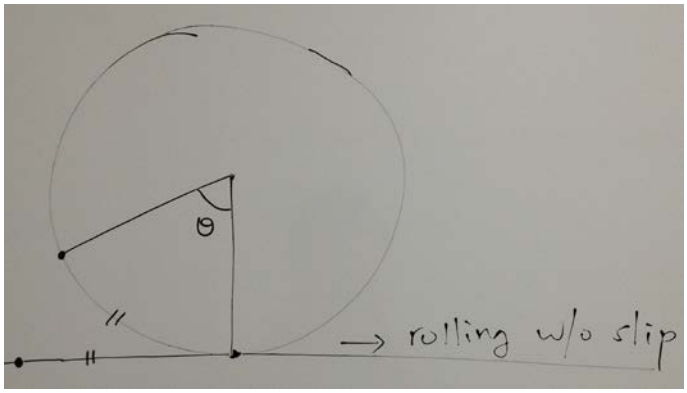
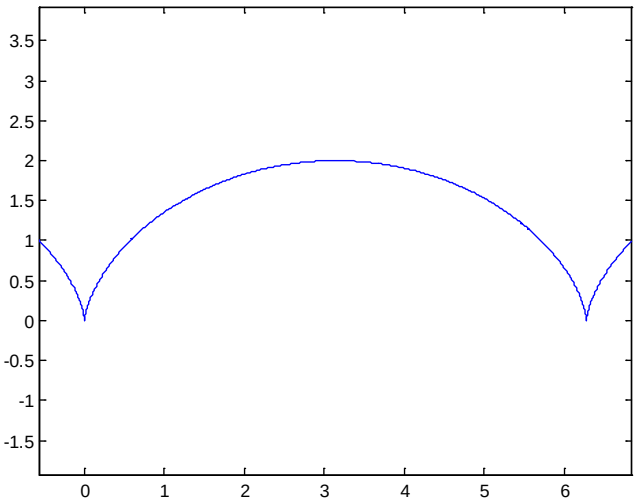
MATLAB HOMEWORK

made by Seungchul Lee

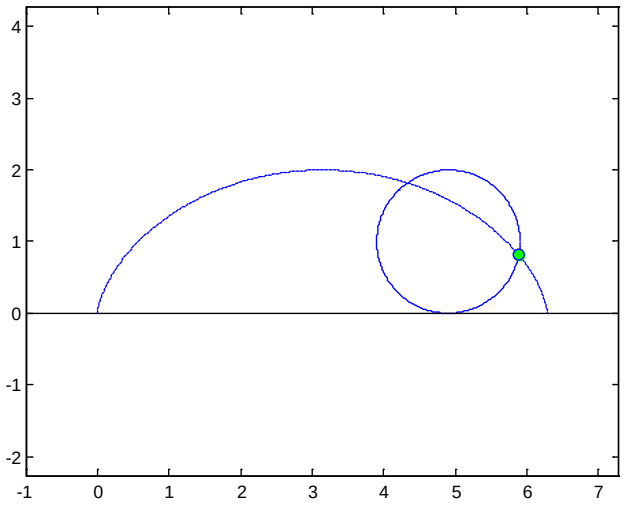
P1 We want to explore a cycloid (refer to `http://en.wikipedia.org/wiki/Cycloid` for more information). A cycloid is the curve traced by a point on the rim of a circular wheel as the wheel rolls along a straight line.



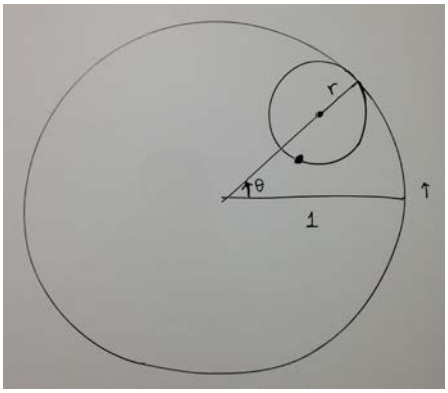
1) Create a m-code to plot the cycloid trajectory. Remember there are many ways to do it.



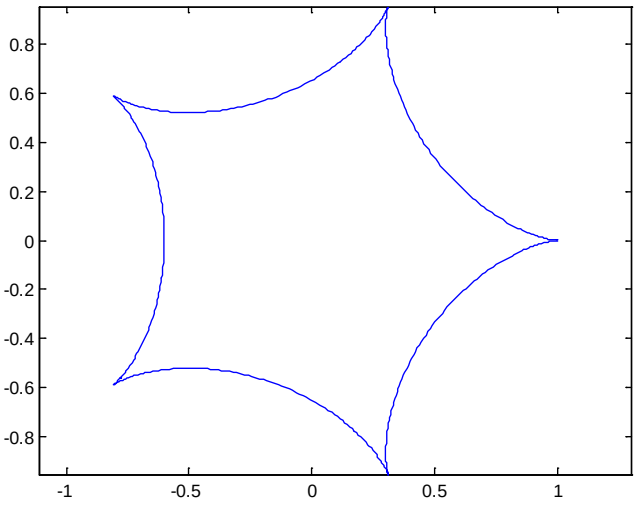
2) Create a m-code to animate a cycloid by a rolling unit circle.



P2 Let's try more complicated one, hypotrochoid (http://en.wikipedia.org/wiki/Hypotrochoid).



1) Write a m-code to plot the cycloid trajectory with r =0.1, 0.2, 0.3, …,0.9



2) Animate the hypotrochoid with two circles (unit circle and circle with radius r)