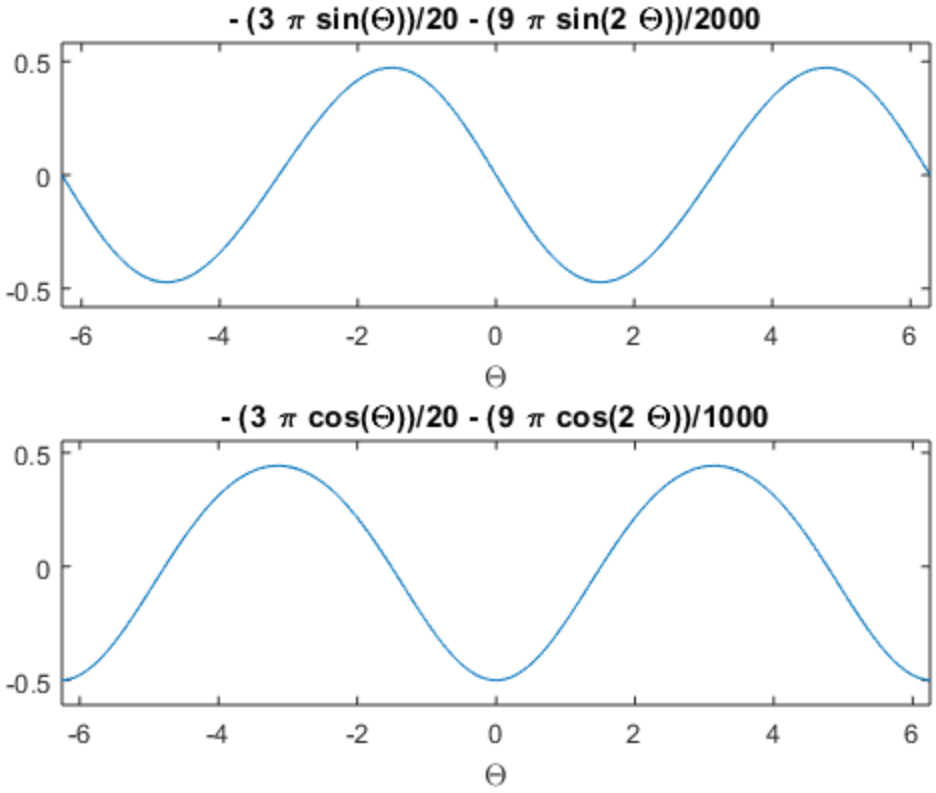
```
%Kyle O'Connor
%
%HW 5
%
%3/5/2016

home;
clear all;
clc;
omega = 150;
r = 0.03;
L = 0.500;
omega_r = 150*(2*pi)*(1/60);

vel = sym('-r*omega_r*sin(Theta) - ((r^2*omega_r*sin(2*Theta))/
(2*L))');
vel = subs(vel);
subplot(2,1,1)
% plot([sp(2) cp(2)),[-.55 , .55],'r',cp[(4) cp(4)],[-.55 .55]
ezplot(vel)
accel = diff(vel,'Theta');
cp = solve(accel==0,'Theta');
cp = double(cp);
cp_deg = cp*180/pi;
jerk = diff(accel,'Theta');
subplot(2,1,2)
ezplot(accel)
maxmin = subs(jerk,'Theta',cp);
maxmin = double(maxmin);
vel_max = double(subs(vel,'Theta',cp(2)))
vel_min = double(subs(vel,'Theta',cp(4)))


vel_max =

   4.7208e-01


vel_min =

  -4.7208e-01
```



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