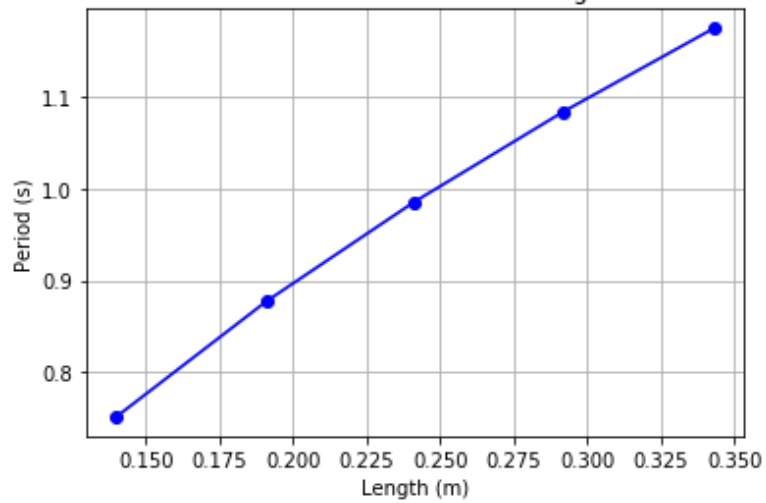


Step 1: Pendulum Setup (lengths 5.5, 7.5, 9.5, 11.5, 13.5 inches)

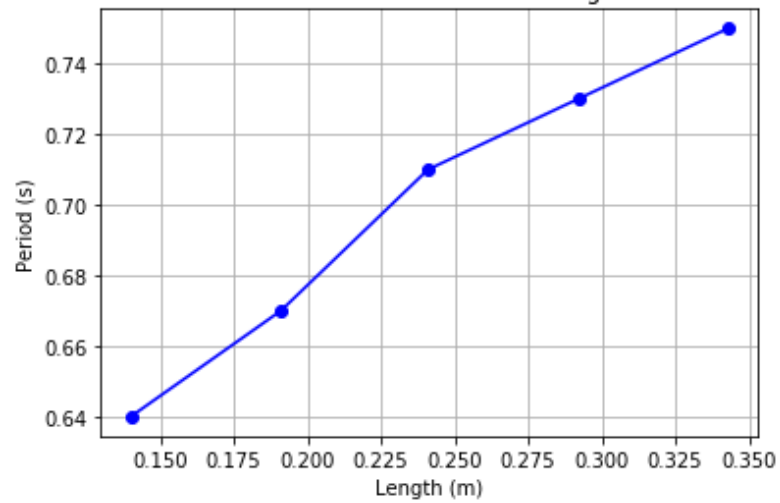


Pendulum Length vs. Theoretical, Real-World, and Numerical Model Periods

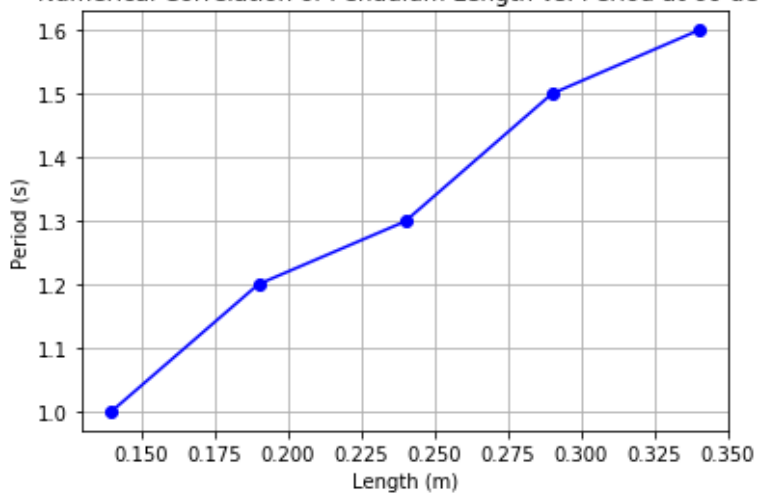
Theoretical Correlation of Pendulum Length vs. Period



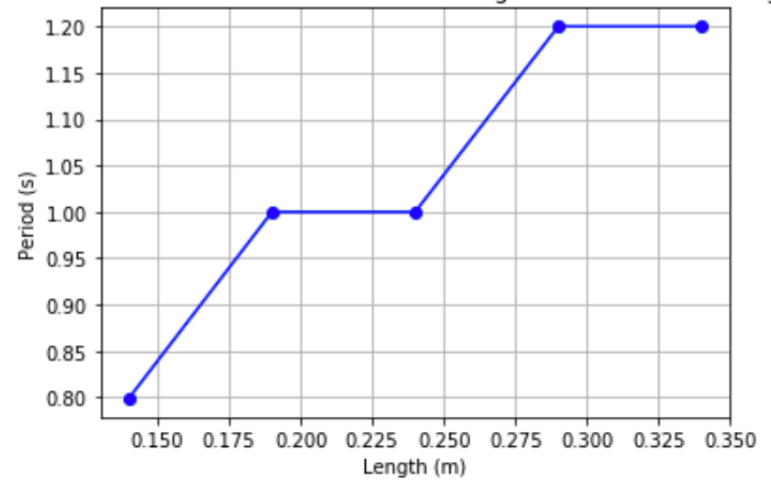
Real-World Correlation of Pendulum Length vs. Period



Numerical Correlation of Pendulum Length vs. Period at 60 deg

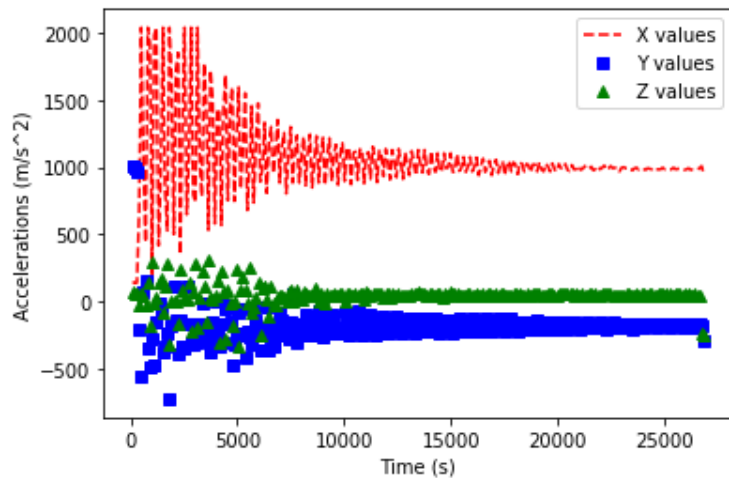


Numerical Correlation of Pendulum Length vs. Period at 120 deg

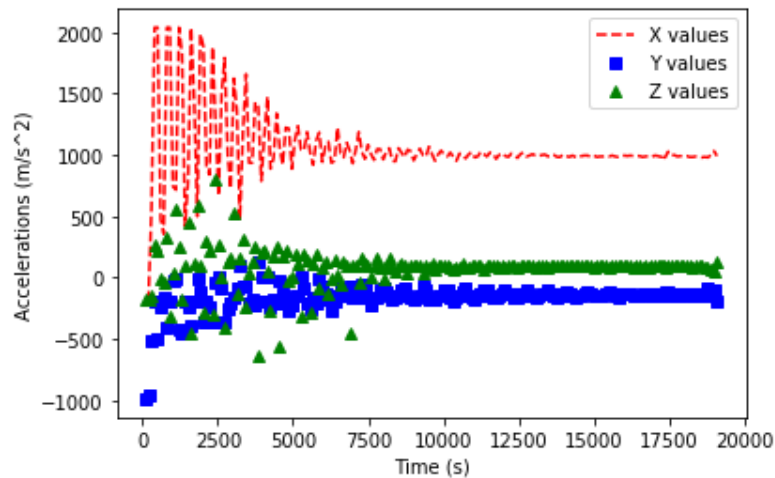


Step 4: Real-World Model Acceleration of Pendulum (x, y, z)

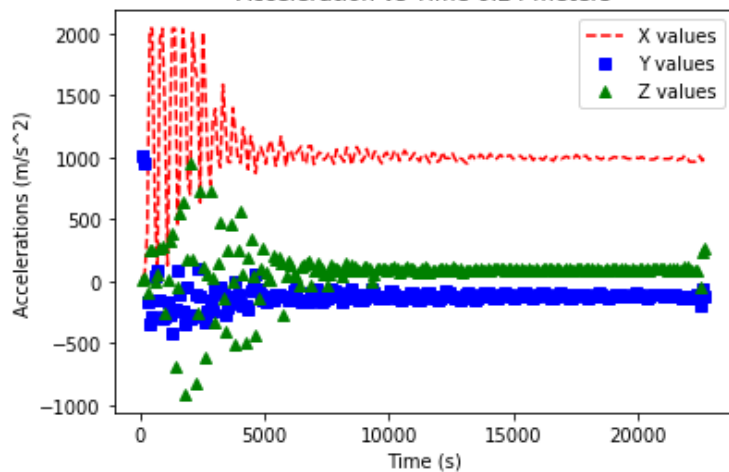
Acceleration vs Time 0.14 meters



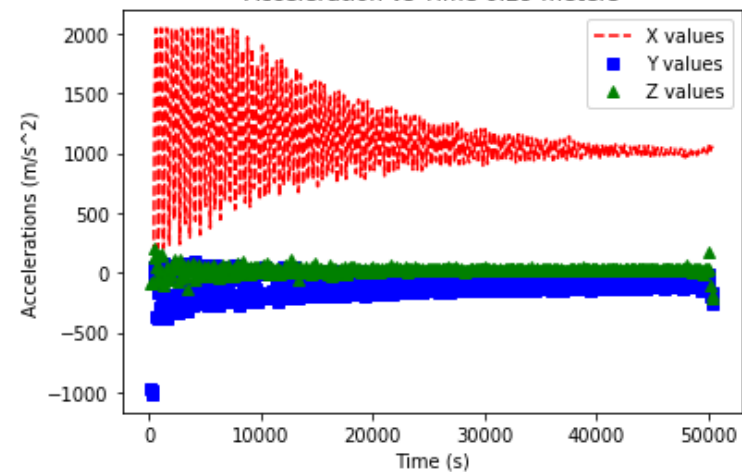
Acceleration vs Time 0.19 meters



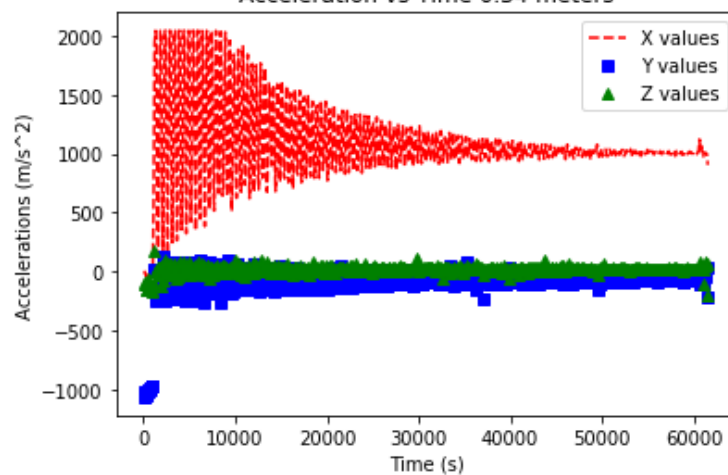
Acceleration vs Time 0.24 meters



Acceleration vs Time 0.29 meters

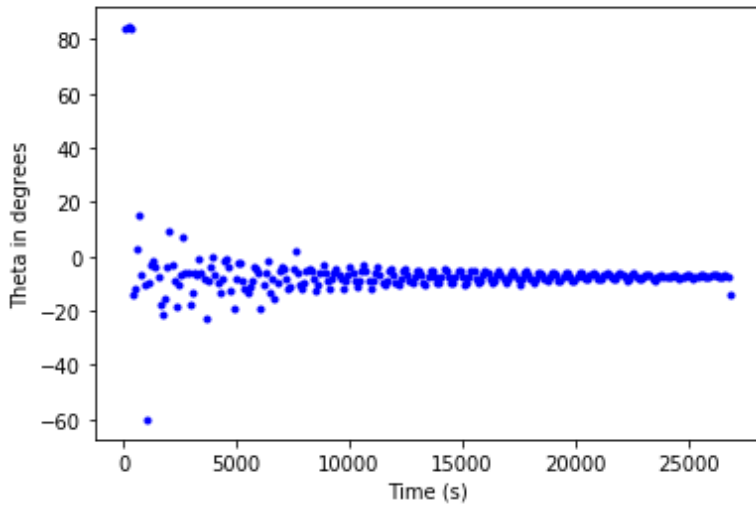


Acceleration vs Time 0.34 meters

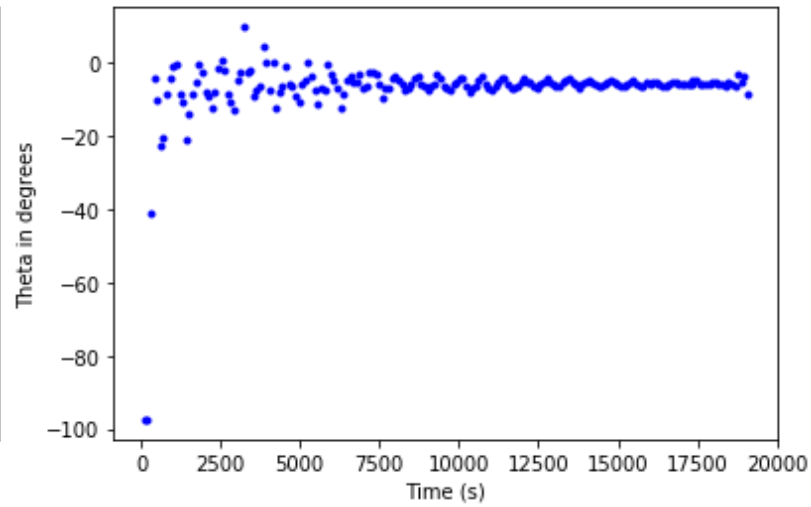


Step 4: Real-World Model Theta vs. Time

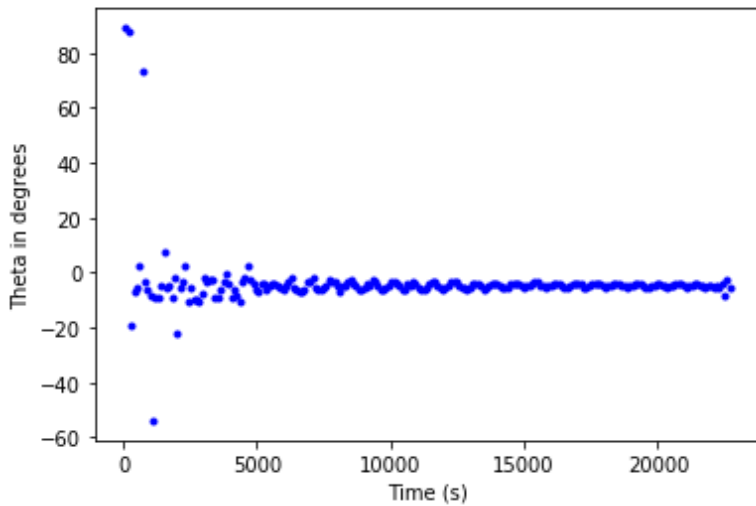
Theta vs. Time 0.14 meters



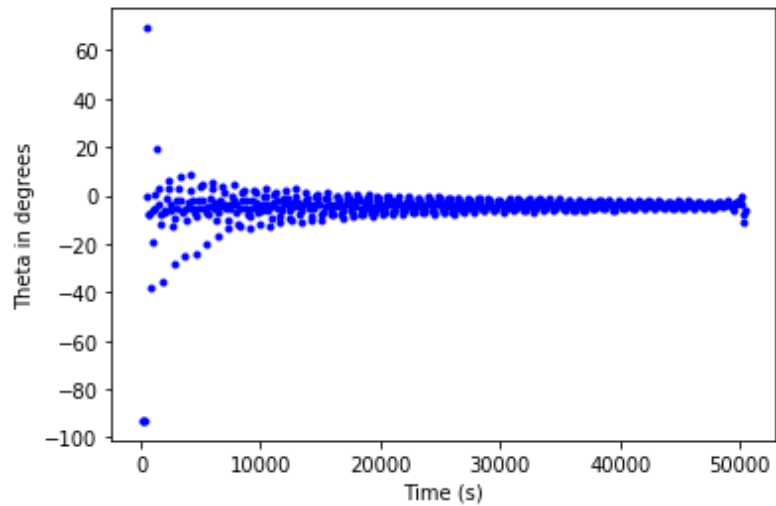
Theta vs. Time 0.19 meters



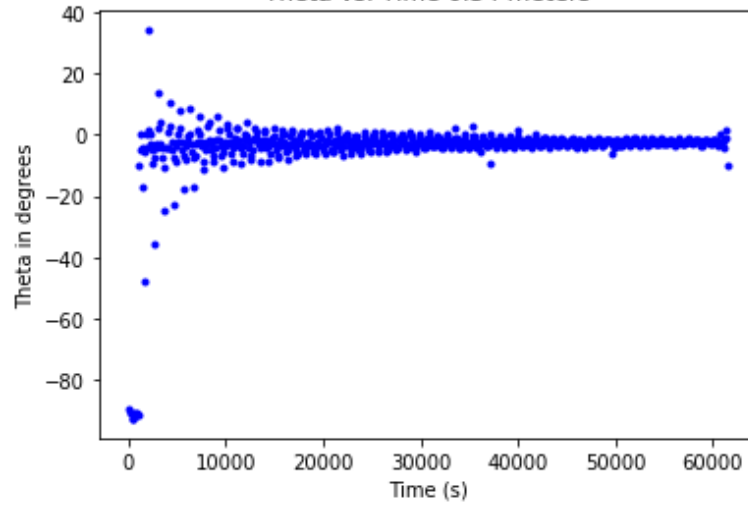
Theta vs. Time 0.24 meters



Theta vs. Time 0.29 meters

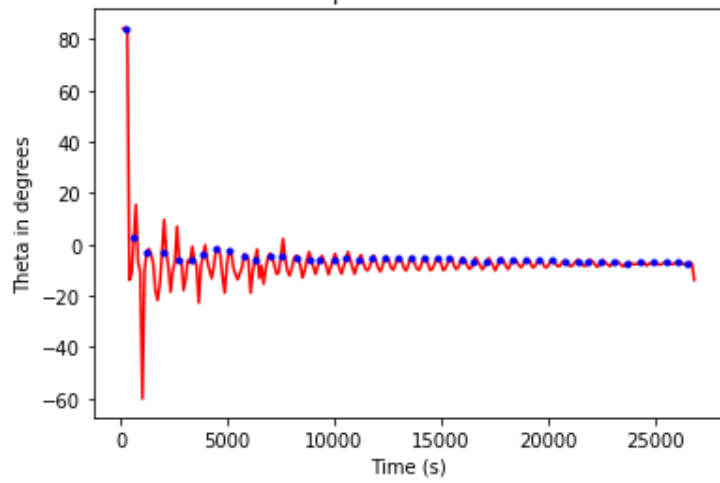


Theta vs. Time 0.34 meters

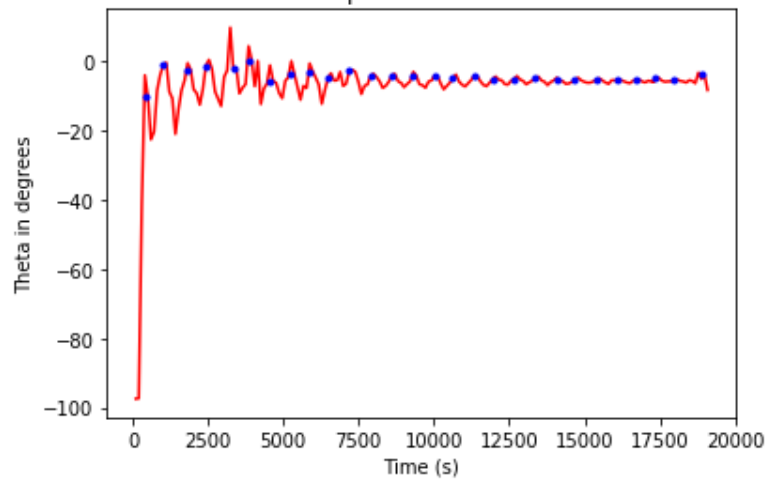


Step 4: Real-World Model Periods

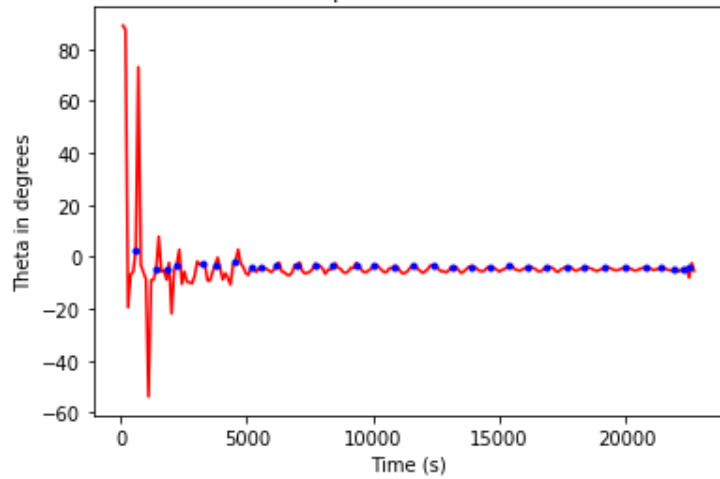
Period of pendulum 0.14 meters



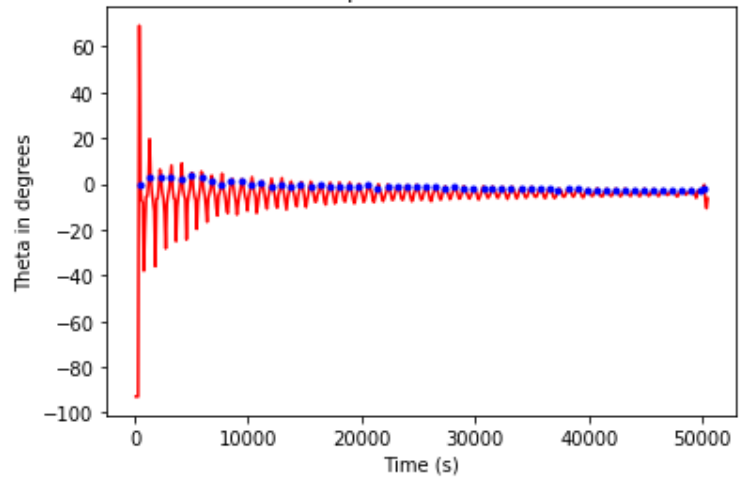
Period of pendulum 0.19 meters



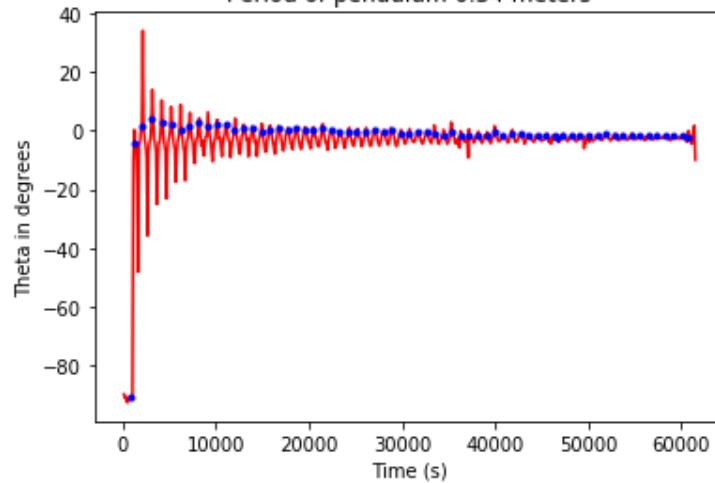
Period of pendulum 0.24 meters



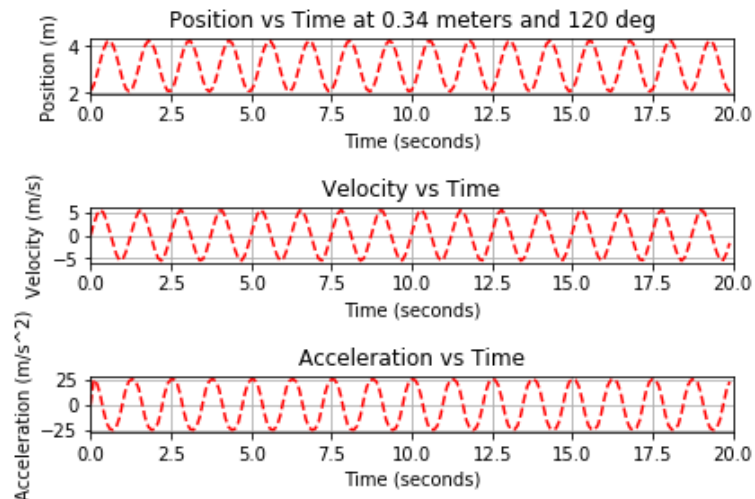
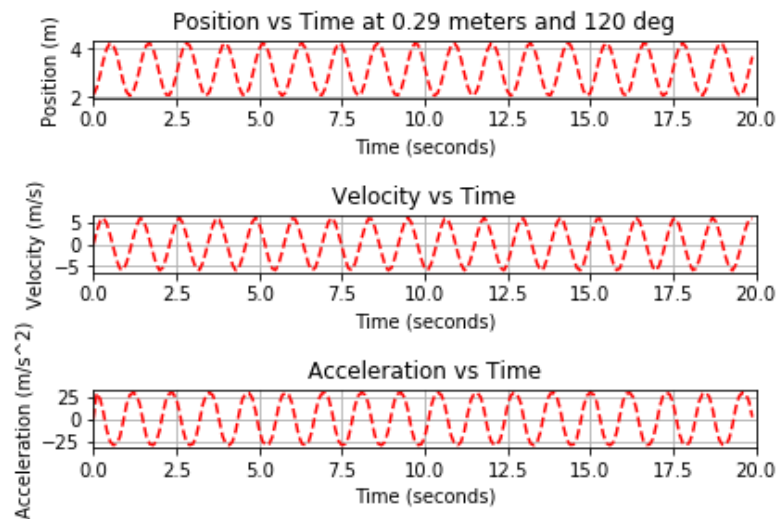
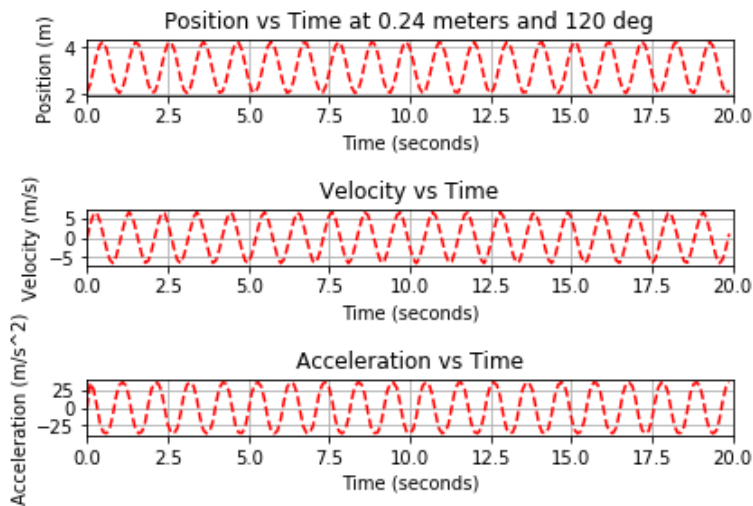
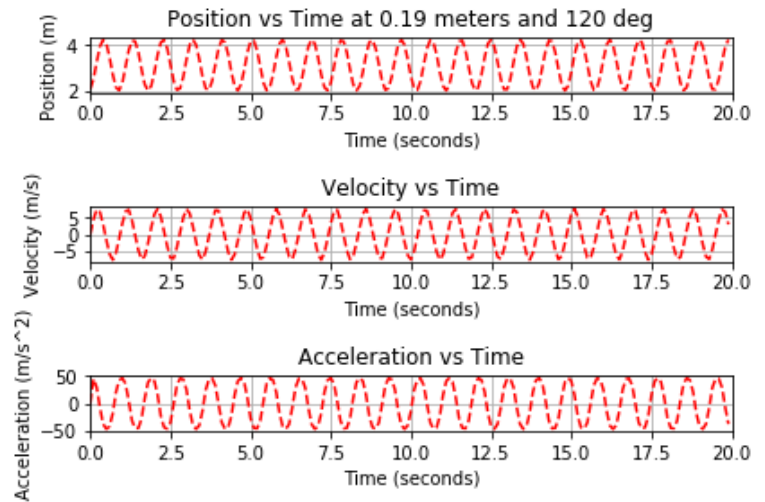
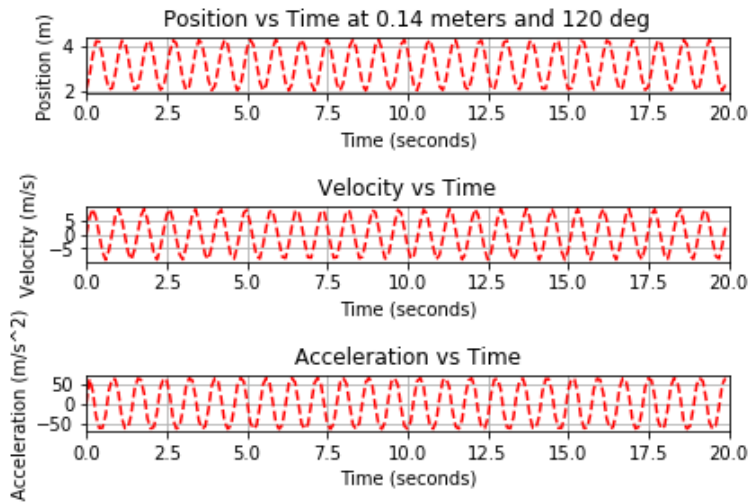
Period of pendulum 0.29 meters



Period of pendulum 0.34 meters



Step 5: Numerical Position, Velocity, and Acceleration at 120 Degrees



Step 5: Numerical Position, Velocity, and Acceleration at 60 Degrees

