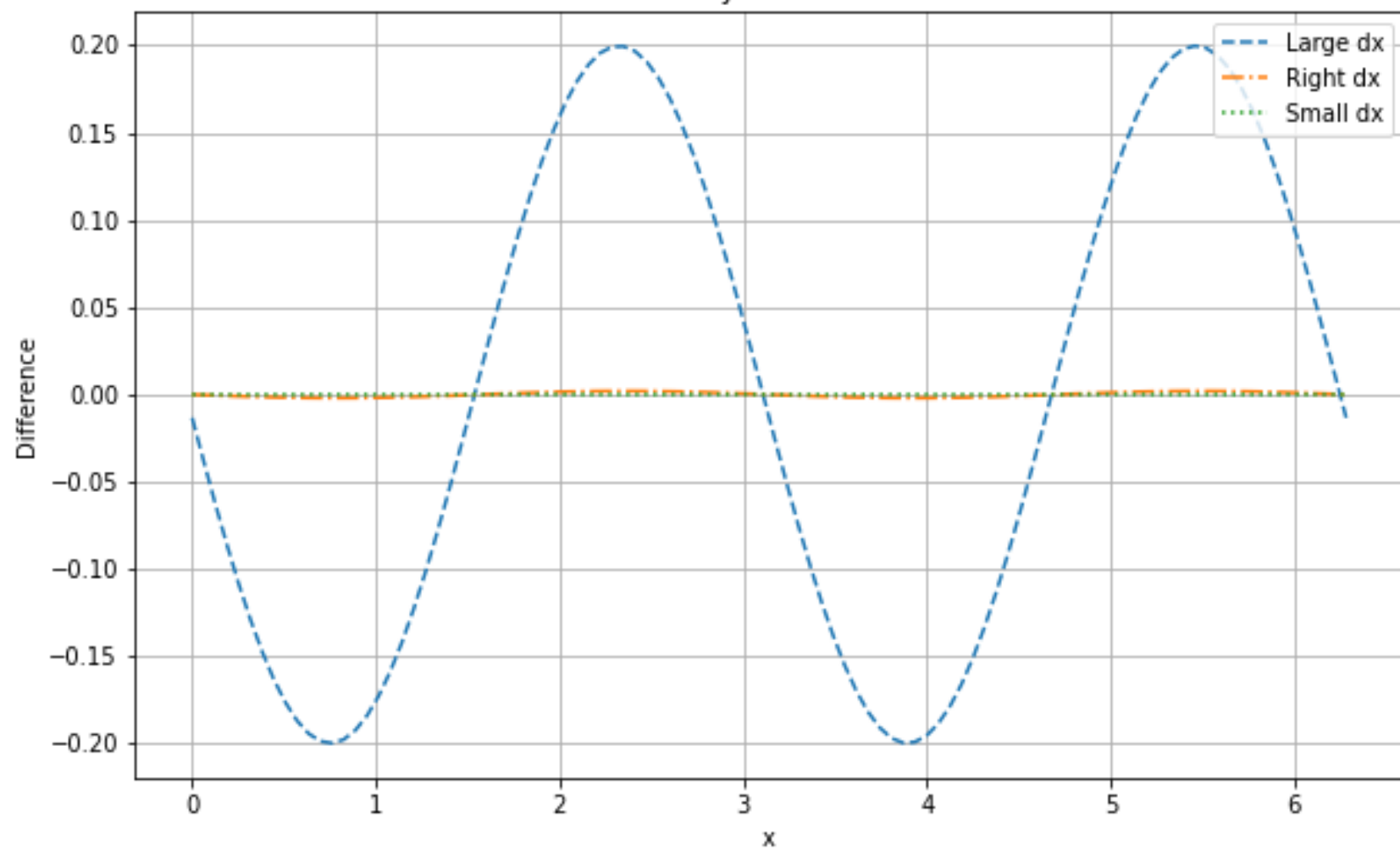
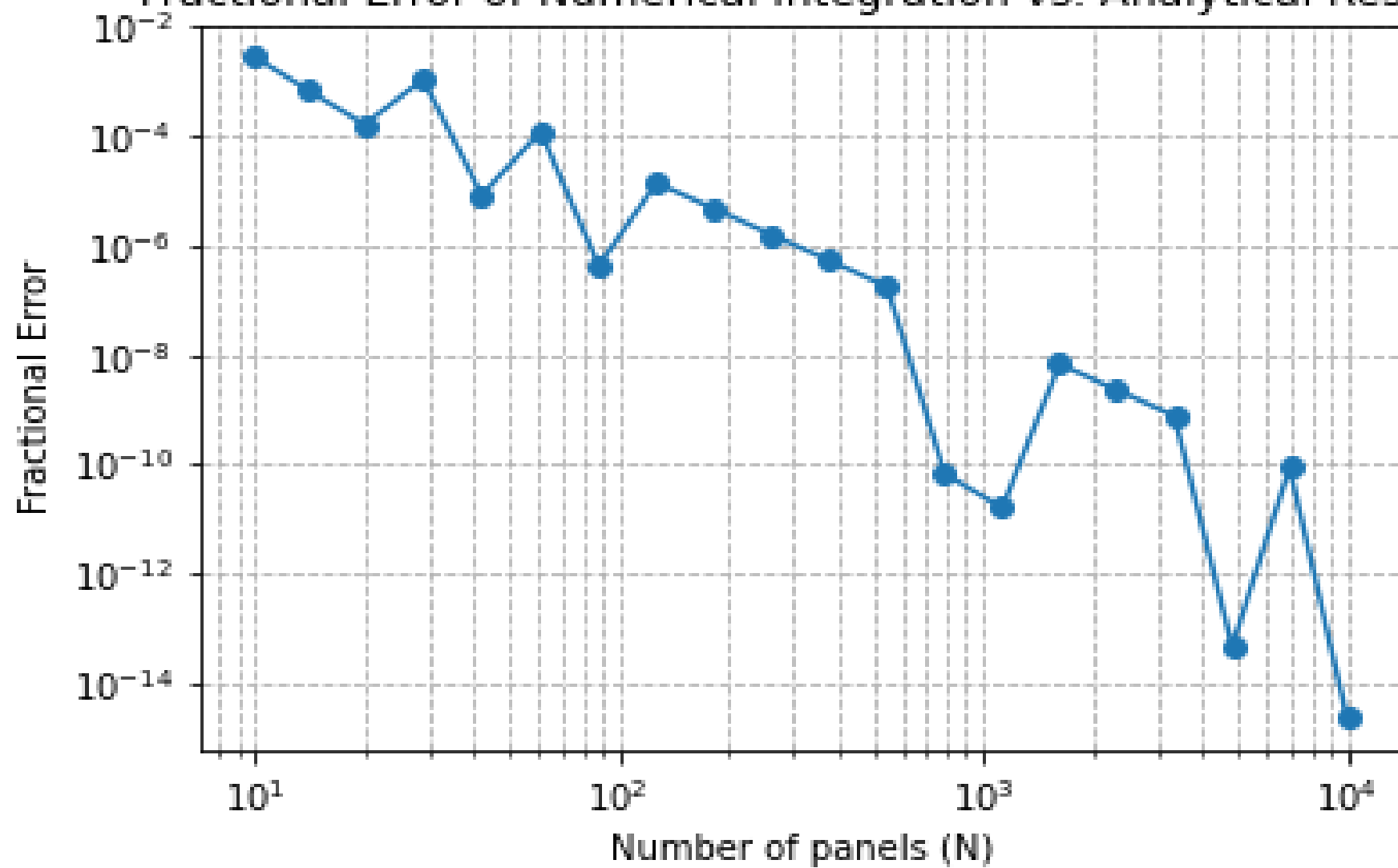


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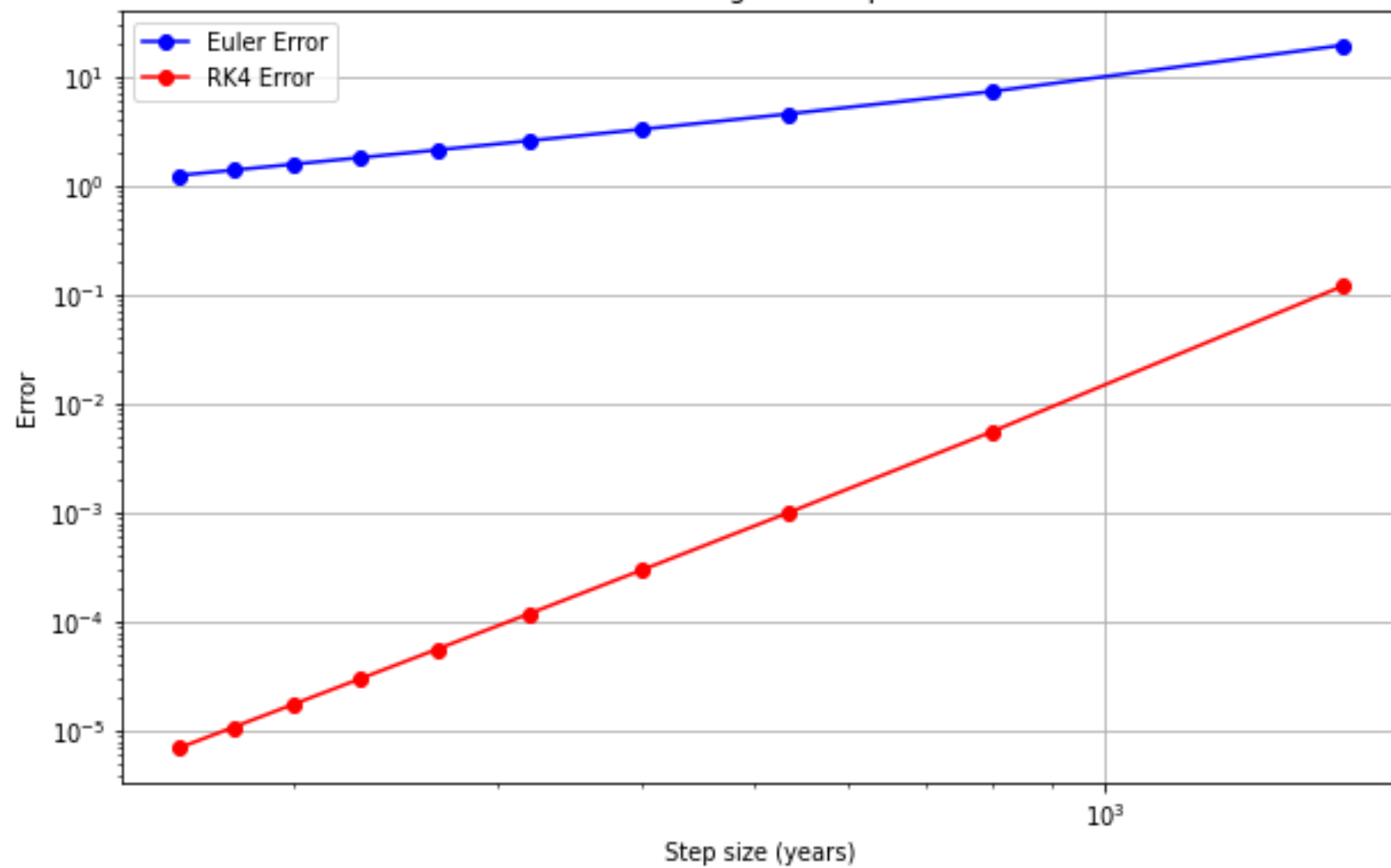
Difference between Analytical and Numerical Derivative



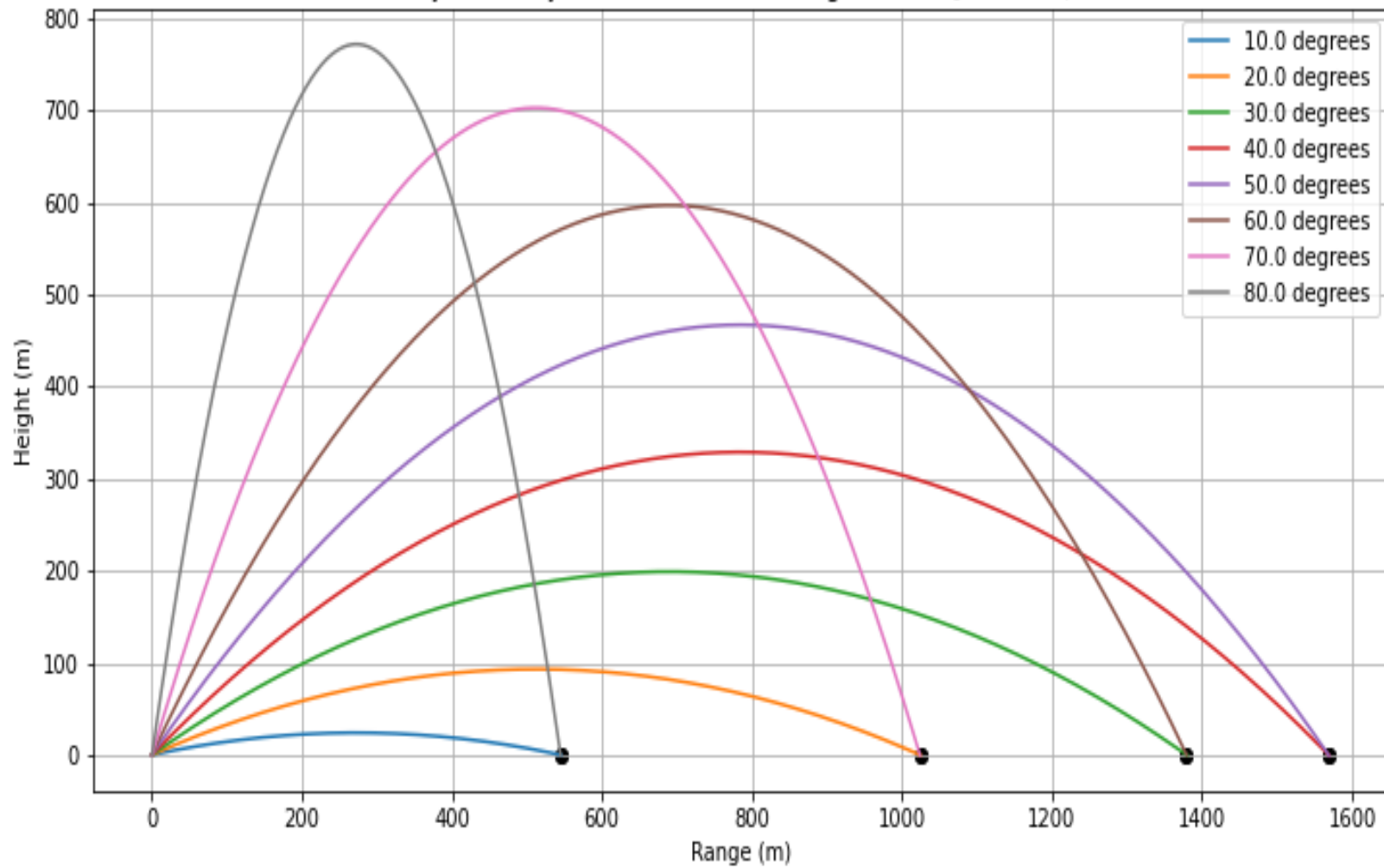
Fractional Error of Numerical Integration vs. Analytical Result



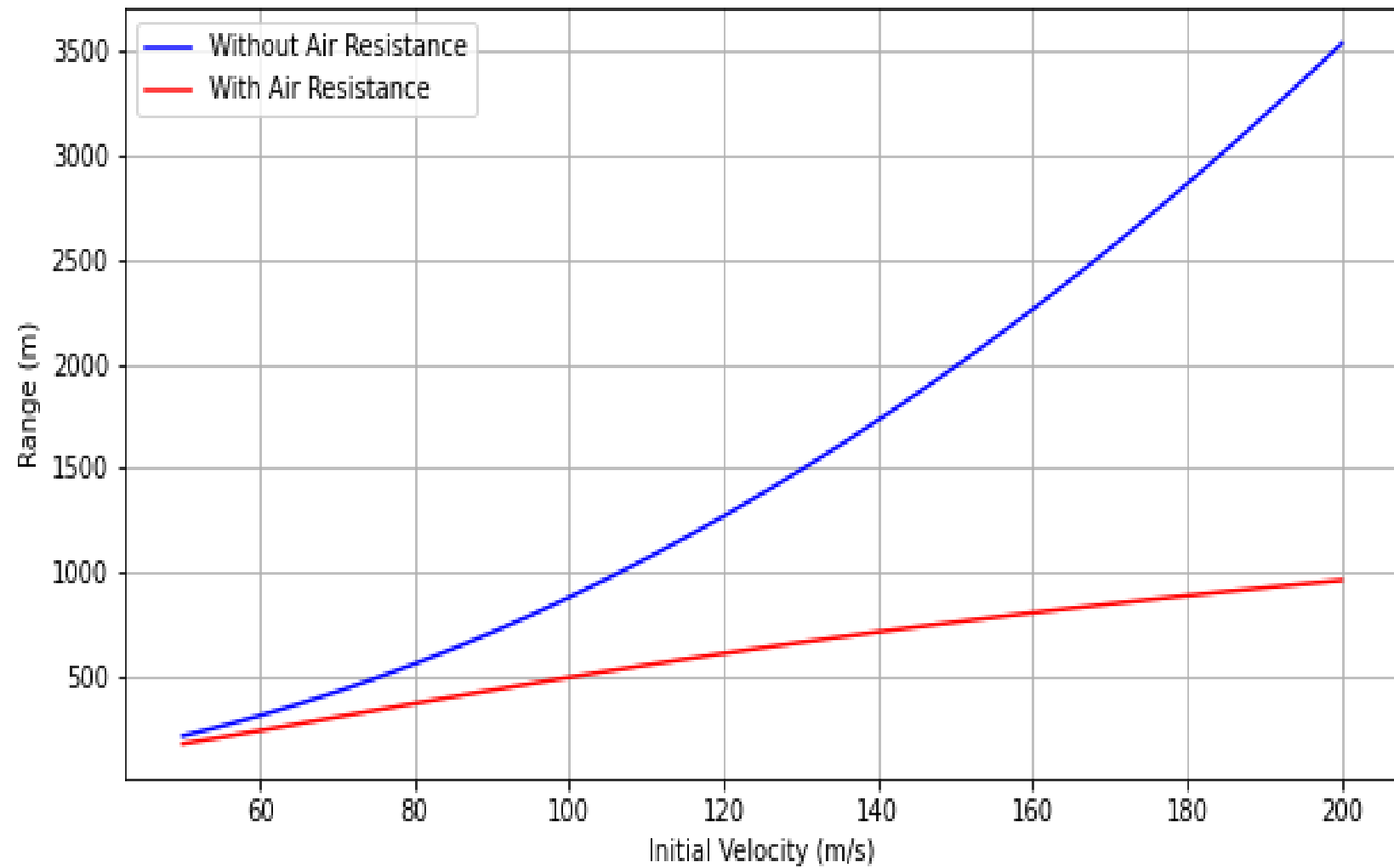
Error Scaling with Step Size



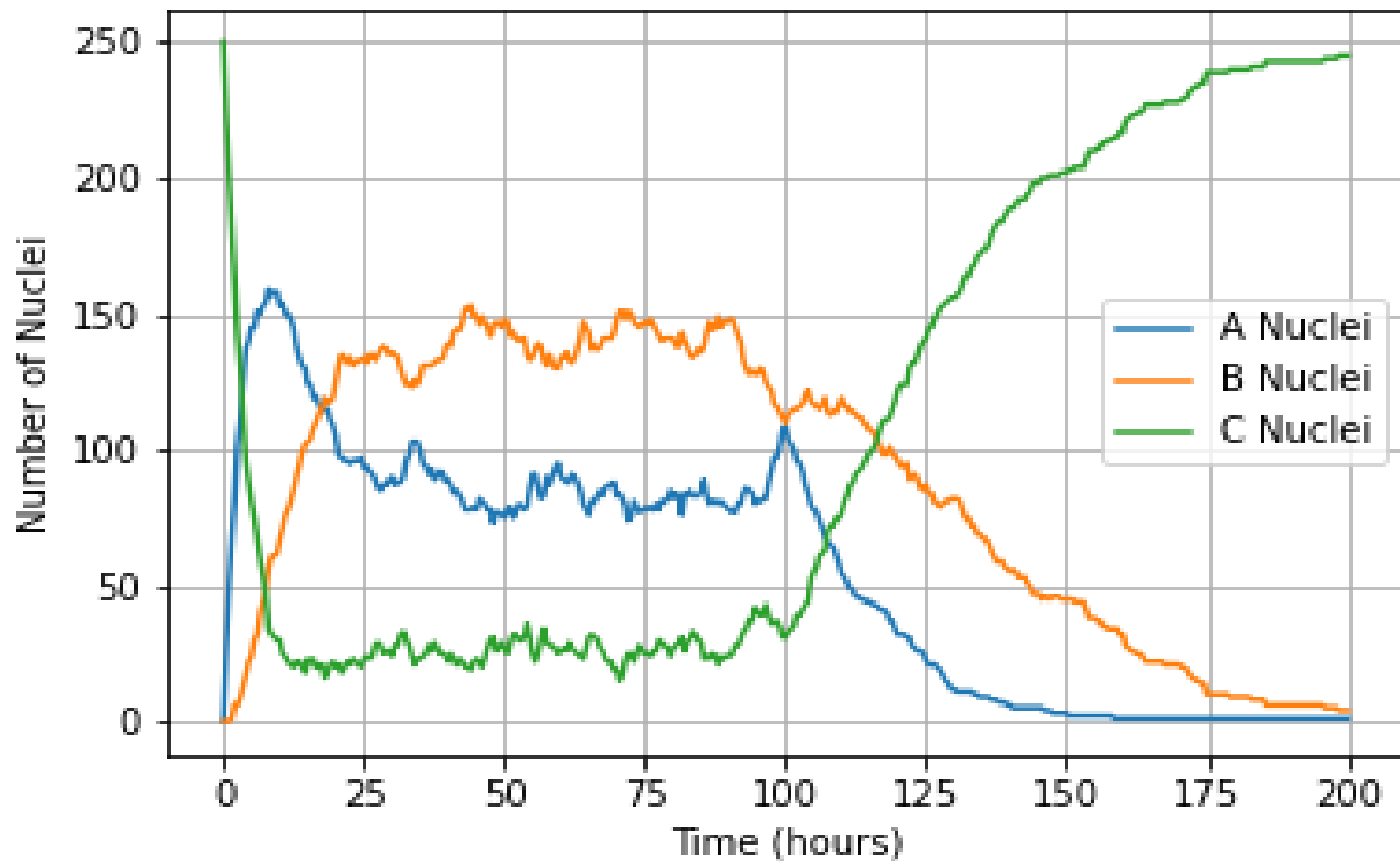
Projectile Trajectories at Different Angles with  $v_0 = 125$  m/s



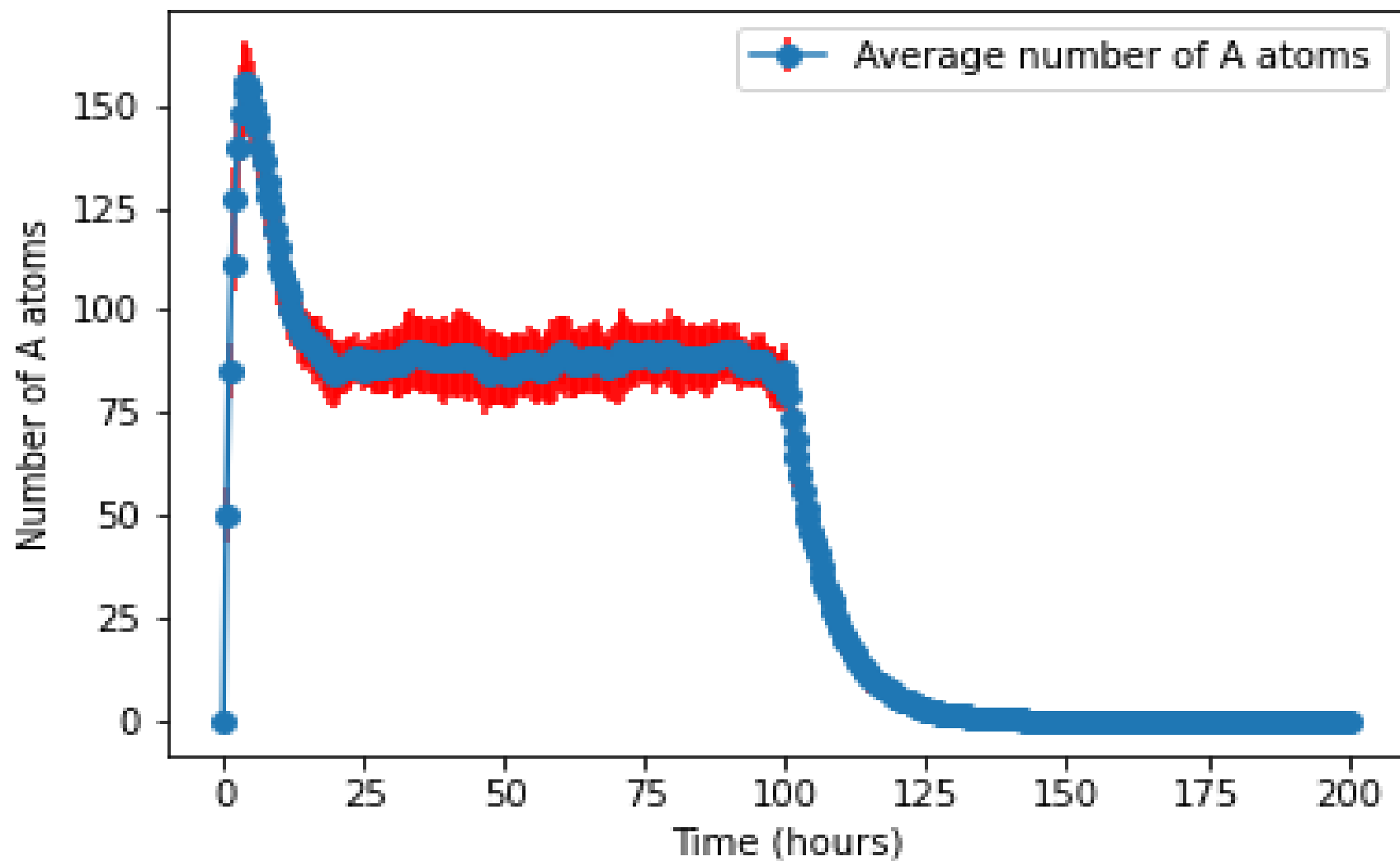
Projectile Range vs Initial Velocity at 60°



Evolution of A, B and C Nuclei

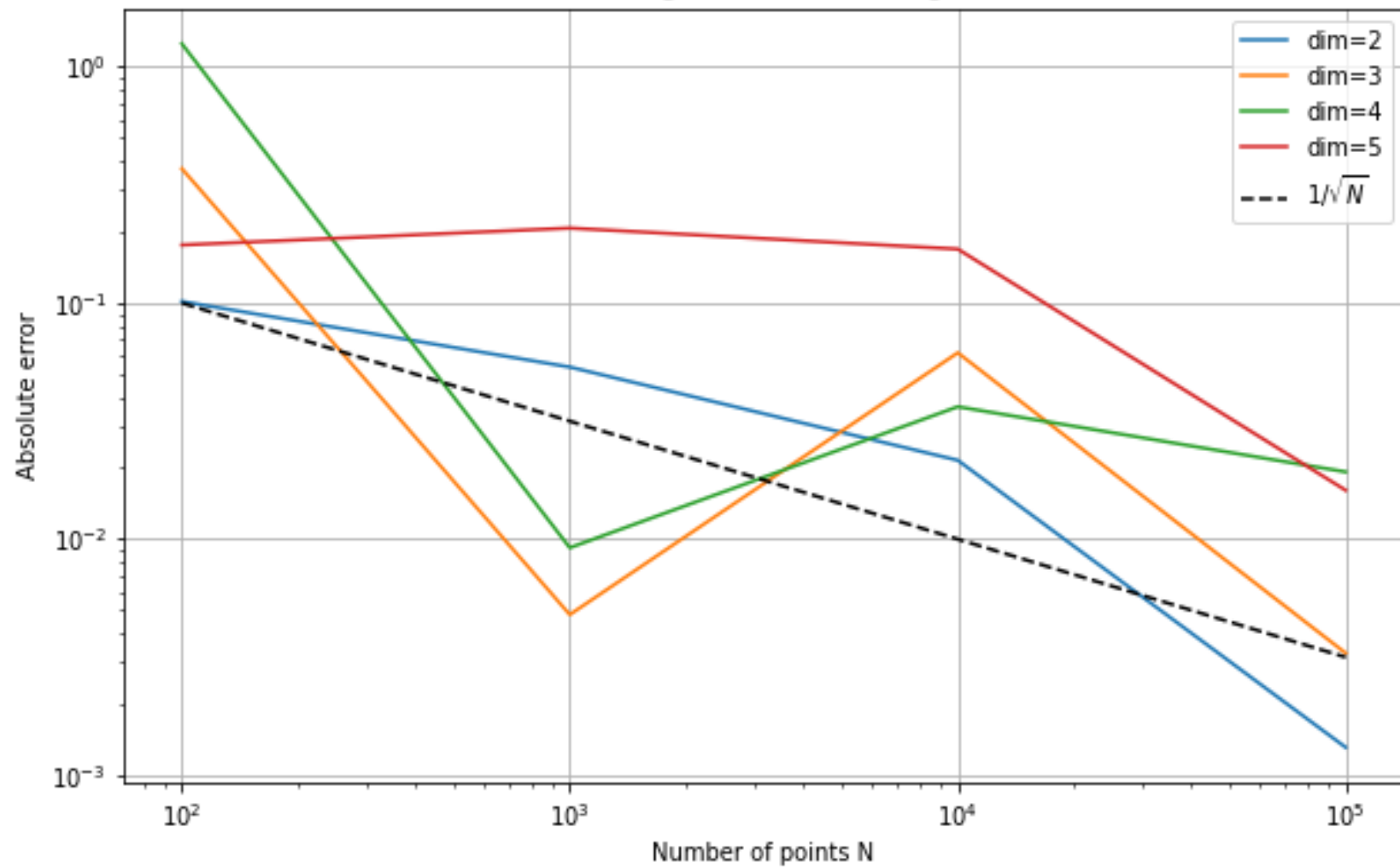


Average and uncertainty on the number of A atoms over time

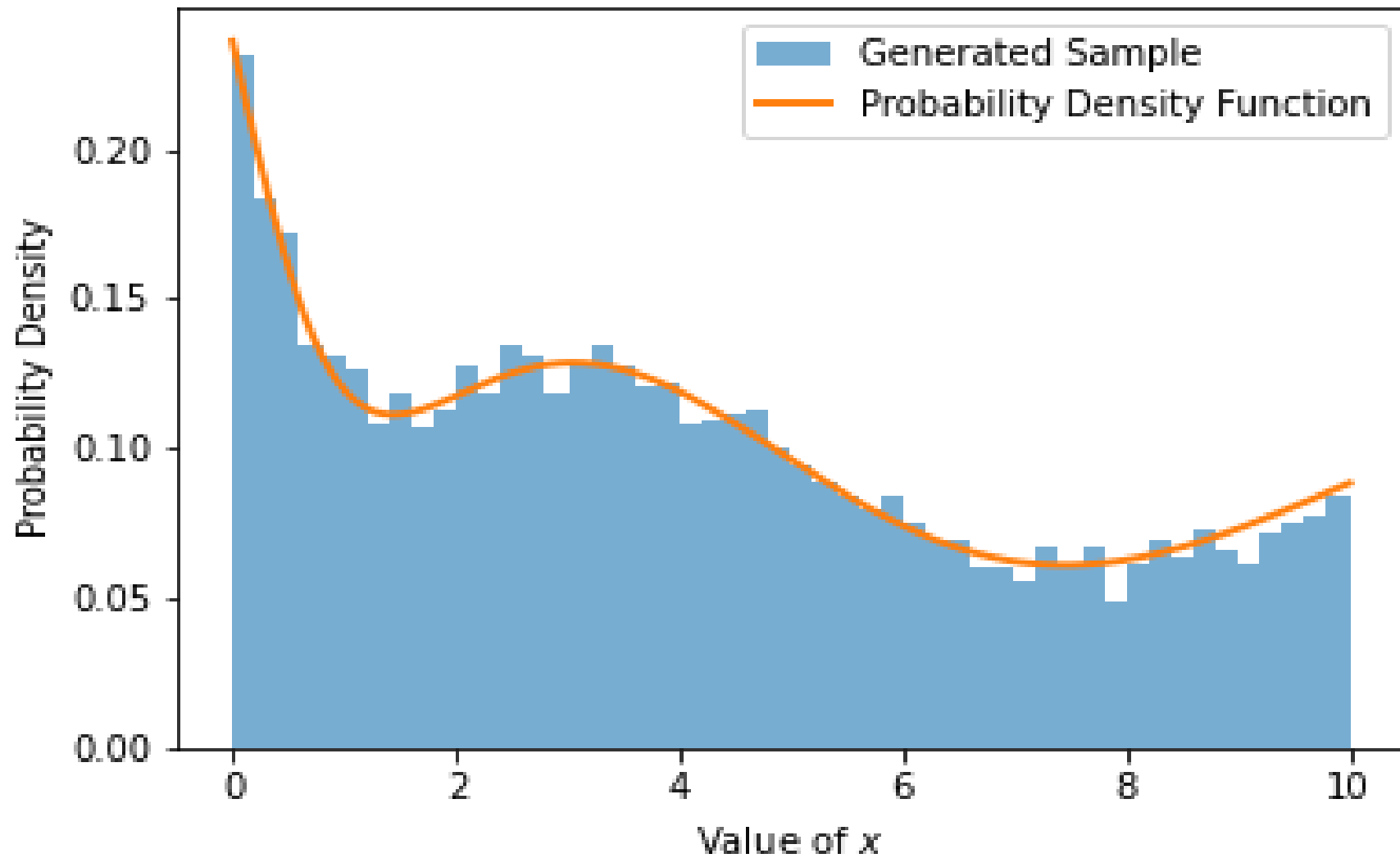




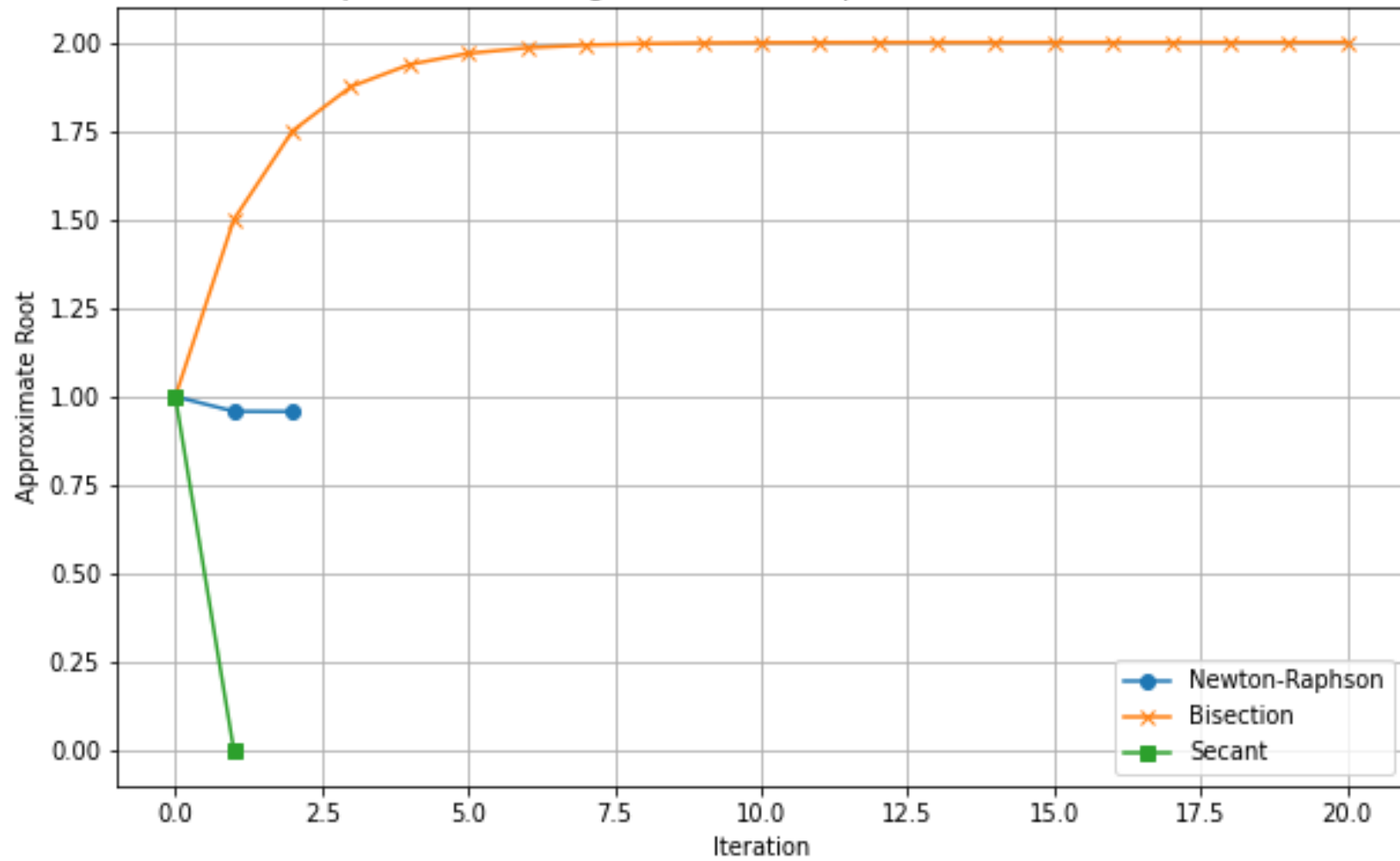
Monte Carlo Integration Error Scaling with  $1/\sqrt{N}$



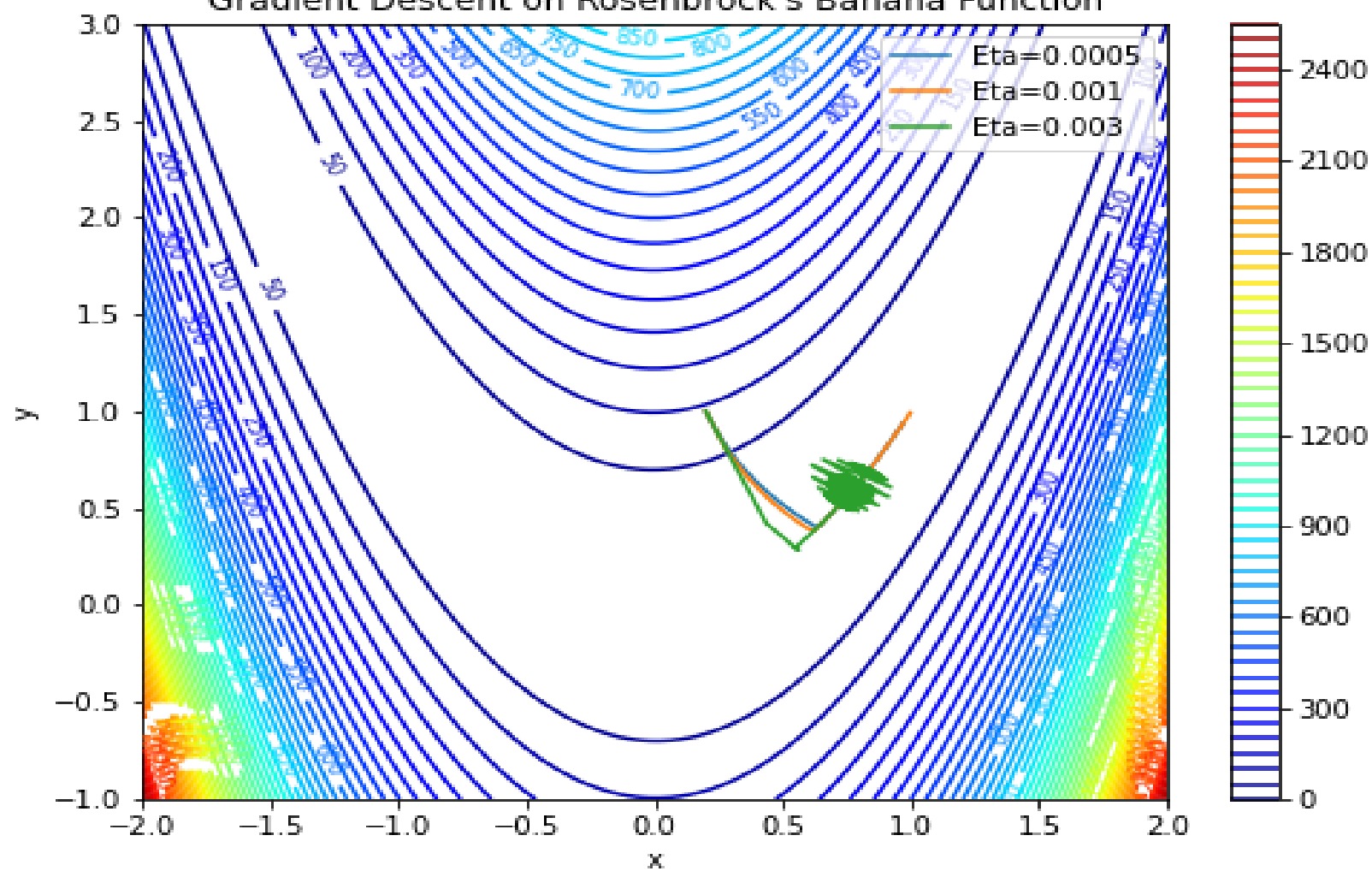
Generated Values Distribution



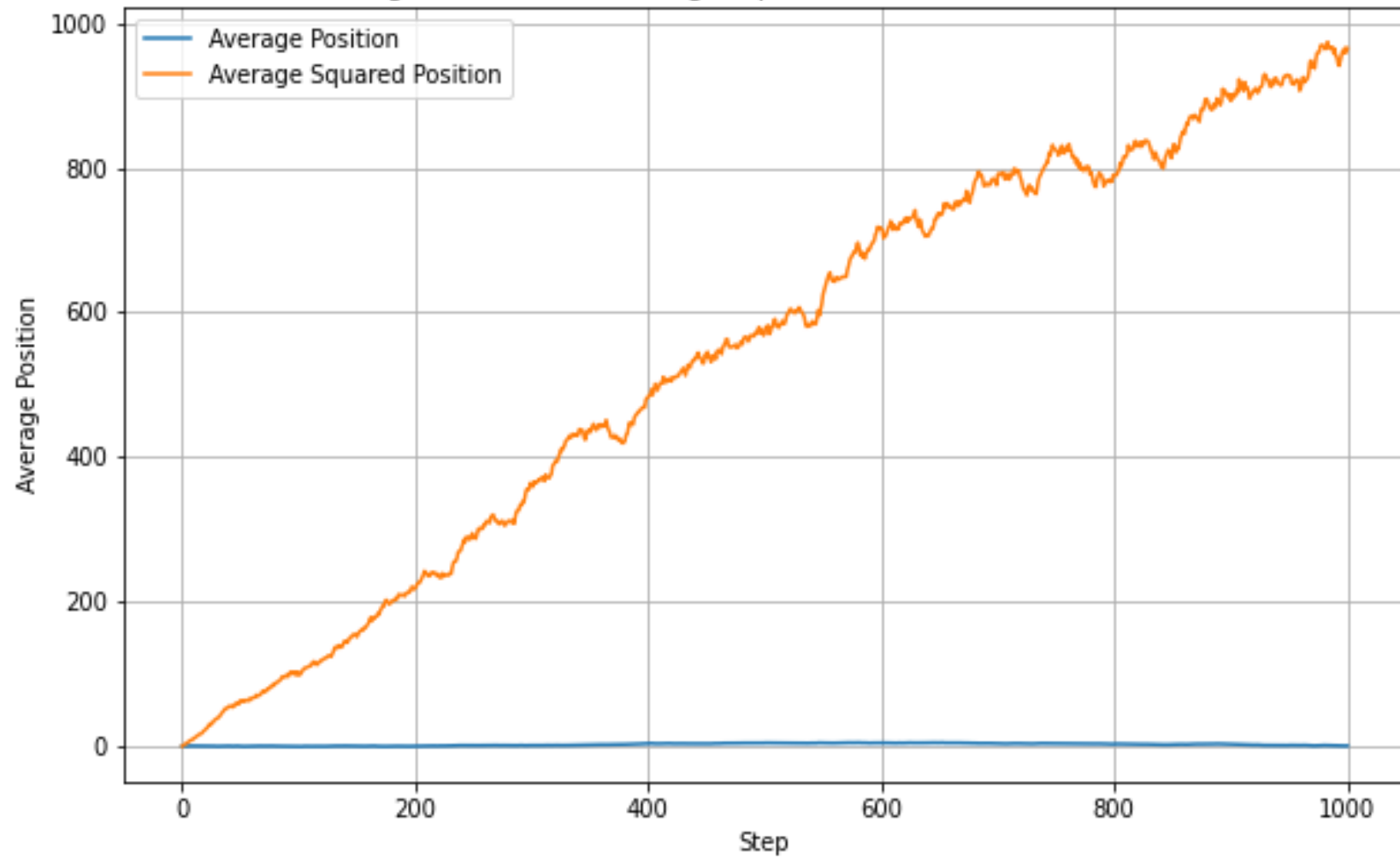
Comparison of Convergence: Newton-Raphson vs Bisection vs Secant



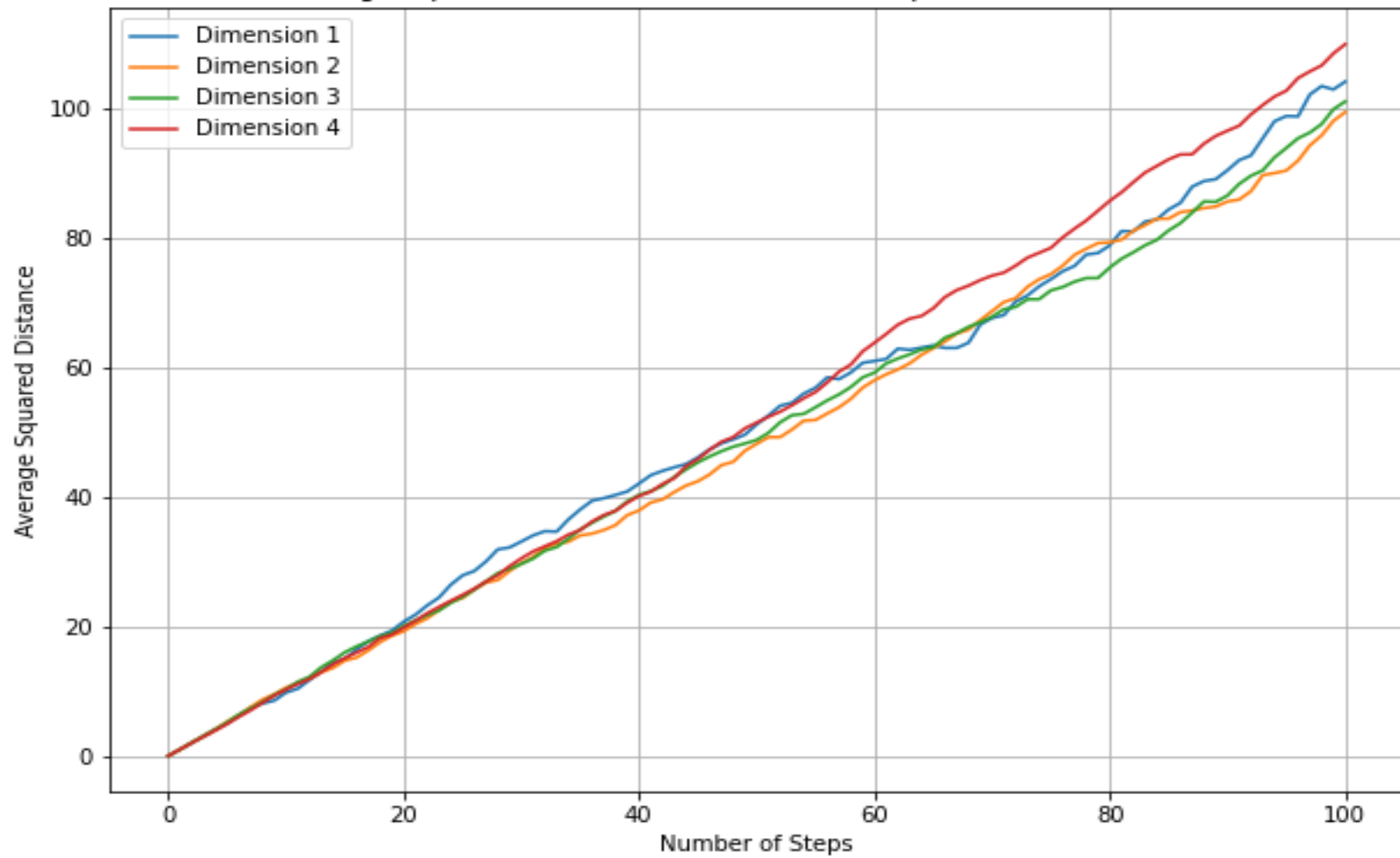
Gradient Descent on Rosenbrock's Banana Function



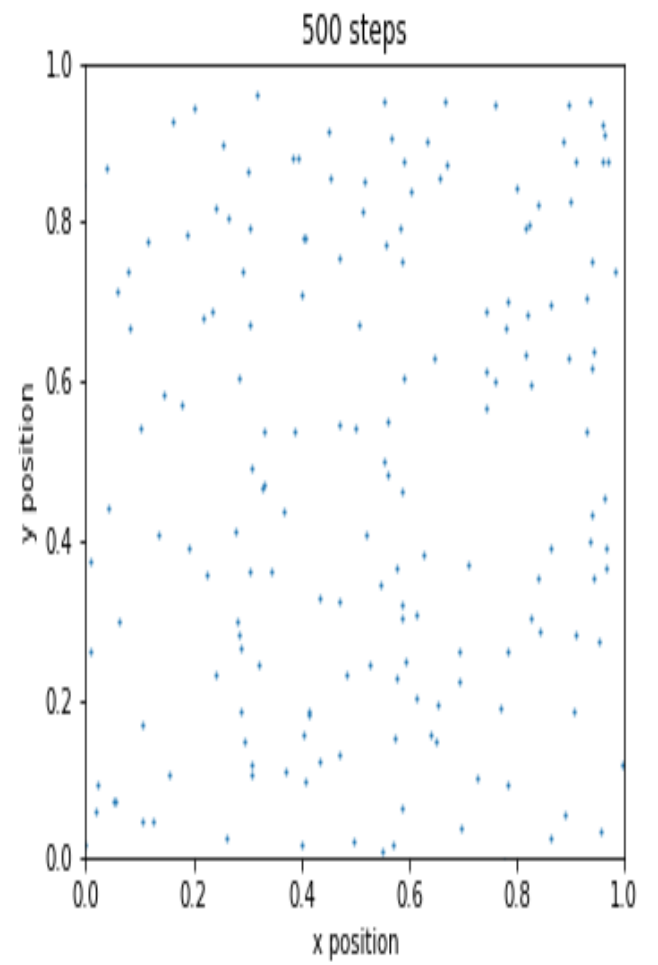
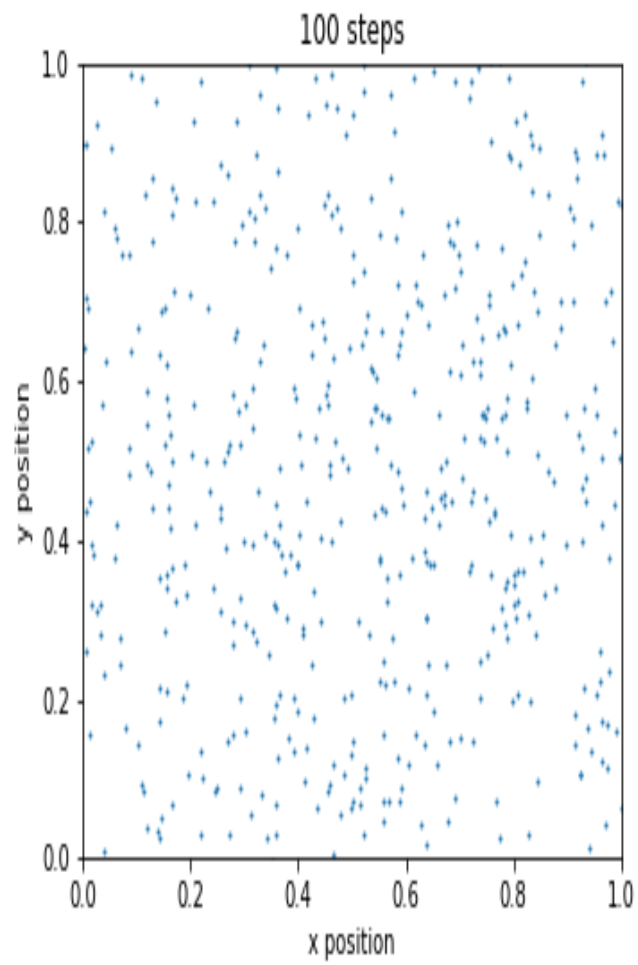
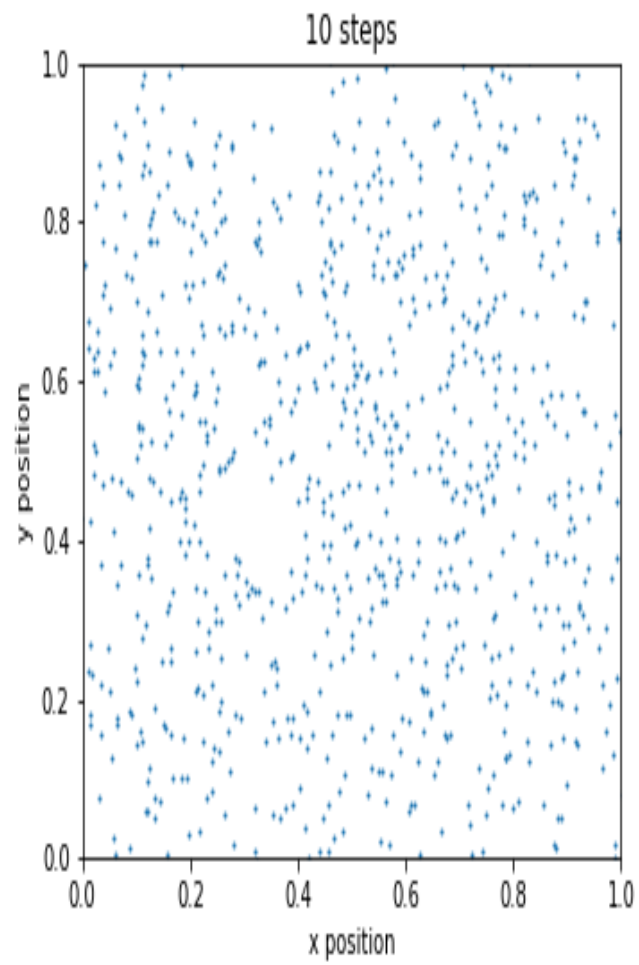
Average Position and Average Squared Position of 100 1D Walkers



Average Squared Distance vs. Number of Steps for Random Walkers



## Diffusion of Particles in a Unit Square



AI?