**VERLET INTEGRATION: BASIC GUIDE**

**INTRODUCTION TO INTEGRALS**

* In mathematics, an integral assigns numbers to functions in a way that can describe displacement, area, volume, and other concepts that arise by combining infinitesimal data. (<https://en.wikipedia.org/wiki/Integral>)
* Terminology and notation of Integrals: ([https://en.wikipedia.org/wiki/Integral#Terminology\_and\_notation](https://en.wikipedia.org/wiki/Integral))



* Properties of Integrals: ([https://en.wikipedia.org/wiki/Integral#Properties](https://en.wikipedia.org/wiki/Integral))
* Linearity:



* Inequalities: *\*NOT RELEVANT\**
* Conventions:







* Computation of Integrals: ([https://en.wikipedia.org/wiki/Integral#Computation](https://en.wikipedia.org/wiki/Integral)) \**ONLY STATED THE ONES THAT MIGHT BE USEFUL\**
* Application of Integrals: ([https://en.wikipedia.org/wiki/Integral#Applications](https://en.wikipedia.org/wiki/Integral)) \**ONLY STATED THE ONES THAT MIGHT BE USEFUL\**
* EDOS:

**INTRODUCTION TO VERLET INTEGRATION**

* Verlet Integration is a numerical method used to integrate Newton’s equations of motion. It is frequently used to calculate trajectories of particles in molecular dynamics simulations and computer graphics. (<https://en.wikipedia.org/wiki/Verlet_integration>)
* The Verlet integrator provides good numerical stability, as well as other properties that are important in physical systems such as time reversibility and preservation of the symplectic form on phase space, at no significant additional computational cost over the simple Euler method. (<https://en.wikipedia.org/wiki/Verlet_integration>)