## Problem

My friend who takes physics doesn’t want to calculate the displacement of an object every time he receives the data for a personal experiment; he just wants a quick and easy solution that allows him to input his start velocity, final velocity and time. After talking to my friend Harrison O’Brien we decided that it would be best to follow the last equation and keep all the variables.

## Solution

The equations we will use in creating the code to calculate the displacement will be the basic kinematic equations. The one that will be focused on and used will be the last one

A math equations on a white background

Description automatically generated <https://en.wikipedia.org/wiki/Kinematics_equations>

If we use the last equation to find displacement() then we would need a start velocity(), an end velocity(), and a time period().

1. Ask the user for the starting velocity and save as the variable start\_Velocity
2. Ask the user for the time period traveled in seconds and save as the variable time\_secs
3. Divide the time\_secs over 3600(seconds in an hour) to convert to hours and save as time\_hr
4. Add the velocities and Multiply the time in hours and then divide the result by 2
5. Save the resulting answer as total\_Displacement
6. Print the answer out as “your total displacement is ” then the displacement