**Constant Velocity**

\[ v = v_0 \quad \text{(constant)} \]
\[ D = v_0 t \quad \text{(distance = velocity \times time)} \]
\[ x = x_0 + v_0 t \quad \text{(coordinate position)} \]

**Constant Acceleration**

\[ v = v_0 + at \]
\[ D = v_0 t + \frac{1}{2} at^2 \]
\[ x = x_0 + v_0 t + \frac{1}{2} at^2 \]
Mathematica Commands

- To define a function \( f \) of \( u \)
  \[
  f[u_] := u^2 + 3u + 5
  \]
  (or whatever)

- To plot a function \( f(u) \)
  
  \[
  \text{Plot}\left[ f[u], \{u, u_1, u_2\},
  \quad \text{Plot Range} \rightarrow \{\{a, b\}, \{c, d\}\}\right]
  \]
  \[
  \{a, b\} = u \text{ range on the graph}
  \]
  \[
  \{c, d\} = f \text{ range on the graph}
  \]

- To solve an equation, numerically,
  
  \[
  \text{FindRoot}\left[ \text{eq}, \{s, s_0\}\right]
  \]
  \[
  \text{eq} \text{ is the equation}
  \]
  \[
  s \text{ is the variable to be solved for}
  \]
  \[
  s_0 \text{ is an initial guess for the solution}
  \]