$$y_{i+1} = y_i + v_i dt$$

$$y_{i+1} = y_i + v_{i+1} dt$$

$$y_{i+1} = y_i + 0.5(v_i + v_{i+1})dt$$

$$y_{i+1} = y_i + \frac{1}{6}(k_1 + 2k_2 + 2k_3 + k_4)dt$$

$$\begin{aligned} E_0 &= KE + GPE \\ &= \frac{1}{2}mv_0^2 - \frac{GM_E m}{(R_E + H)} \end{aligned}$$

$$f \equiv \left| \frac{E_f - E_0}{E_0} \right|$$

$$\log(f) = a + b \log(dt)$$

$$f = 10^a \, (dt)^b$$