1 Introduction

- The differential equation for newton's equation is $\frac{dv}{dt} = g - \frac{cv}{m}$, where cv is the drag coefficient $\times$ velocity.

$$\frac{dv}{dt} = g - \frac{cv}{m} \tag{1}$$

$$dv = (g - \frac{cv}{m})dt \tag{2}$$

$$\int \frac{1}{g - \frac{cv}{m}} dv = \int dt \tag{3}$$

$$\lg(g - \frac{cv}{m}) = t + c \tag{4}$$

$$v = mg/c(1 - e^{c/mt}) \tag{5}$$