Variable	Name	Description	Units
d	Displacement	How far the object travelled.	m
t	Time	How long the object took to travel.	s
v_i	Initial Velocity	The object's velocity at the start.	m/s
v_f	Final Velocity	The object's velocity at the end.	m/s
a	Acceleration	The object's rate of velocity gain.	m/s^2

$$d = v_i t + (0.5)at^2$$

$$v_f = v_i + at$$

Free Fall: a = -10 m/s^2

Upward Throw

v_f = 0 at the top