

## Formulas

### Motion

$$y_f = y_0 + v_0(\Delta t) + \frac{1}{2}a(\Delta t^2) \quad (1)$$

### Force

$$\vec{F} = m\vec{a} \quad (2)$$

Drag Force:

$$\vec{F}_D = \quad (3)$$

### Key

$v$  = velocity, meters/second

$y$  = height, meters

$t$  = time, seconds

$a$  = acceleration, meters/second<sup>2</sup>

$g$  = standard earth acceleration:  $9.8\text{m/s}^2$