Potentially useful information:

$$v_{av} = \frac{\Delta x}{\Delta t}$$
$$v = \frac{dx}{dt}$$
$$a_{av} = \frac{\Delta v}{\Delta t}$$
$$a = \frac{dv}{dt} = \frac{d^2x}{dt^2}$$

$$\Delta x = \int_{t_1}^{t_2} v\, dt$$
$$\Delta v = \int_{t_1}^{t_2} a\, dt$$

Constant Acceleration

$$v = v_0 + a(t - t_0)$$
$$x = x_0 + v_0(t - t_0) + \frac{1}{2}a(t - t_0)^2$$
$$v_{av} = \frac{1}{2}(v_0 + v)$$
$$v^2 = v_0^2 + 2a(x - x_0)$$

$$\vec{v} = \frac{d\vec{r}}{dt}$$
$$\vec{a} = \frac{d\vec{v}}{dt}$$

Projectile Motion

$$R = \frac{v_0^2}{g}\sin 2\theta_0 \qquad \text{impact at same height as launch}$$
$$y = x\tan\theta_0 - \frac{g}{2v_0^2\cos^2\theta_0}x^2$$

Circular Motion

$$a_c = \frac{v^2}{r}$$
$$a_t = \frac{dv}{dt}$$
$$T = \frac{2\pi r}{v}$$

Data

$$g = 9.81 \text{ m/s}^2$$
$$v_S = 343 \text{ m/s} \qquad \text{speed of sound}$$
$$c = 2.998 \times 10^8 \text{ m/s} \qquad \text{speed of light}$$
$$1 \text{ mi} = 1.609 \text{ km}$$