Formula Sheet for Exam 1

$$v = v_0 + a(t - t_0)$$

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

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

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

$$v^2 = v_0^2 + 2a(x - x_0)$$

$$\sum \vec{F} \equiv \vec{F}_{net} = m\vec{a}$$

$$T = \frac{2\pi r}{v}$$

$$a_{centripetal} = \frac{v^2}{r}$$

$$F_{centripetal} = m\frac{v^2}{r}$$

$$\vec{p} \equiv m\vec{v}$$

$$\sum \vec{F} \equiv \vec{F}_{net} = \frac{d\vec{p}}{dt}$$

$$\vec{J} \equiv \int \vec{F}\,dt = \Delta\vec{p}$$