

**Kinematics Equations**  
**(for constant “a”)**

**missing**

a       $\Delta x = \frac{1}{2}(v_f + v_i) t$

$\Delta x$      $v_f = v_i + at$

$v_f$        $\Delta x = v_i t + \frac{1}{2} at^2$

t       $v_f^2 = v_i^2 + 2a\Delta x$

$v_i$        $\Delta x = v_f t - \frac{1}{2} at^2$

**(for constant “a”)**

**missing**

$\alpha$        $\Delta\theta = \frac{1}{2}(\omega_f + \omega_i) t$

$\Delta\theta$      $\omega_f = \omega_i + \alpha t$

$\omega_f$        $\Delta\theta = \omega_i t + \frac{1}{2}\alpha t^2$

t       $\omega_f^2 = \omega_i^2 + 2 \alpha\Delta\theta$

$\omega_i$        $\Delta\theta = \omega_f t - \frac{1}{2}\alpha t^2$