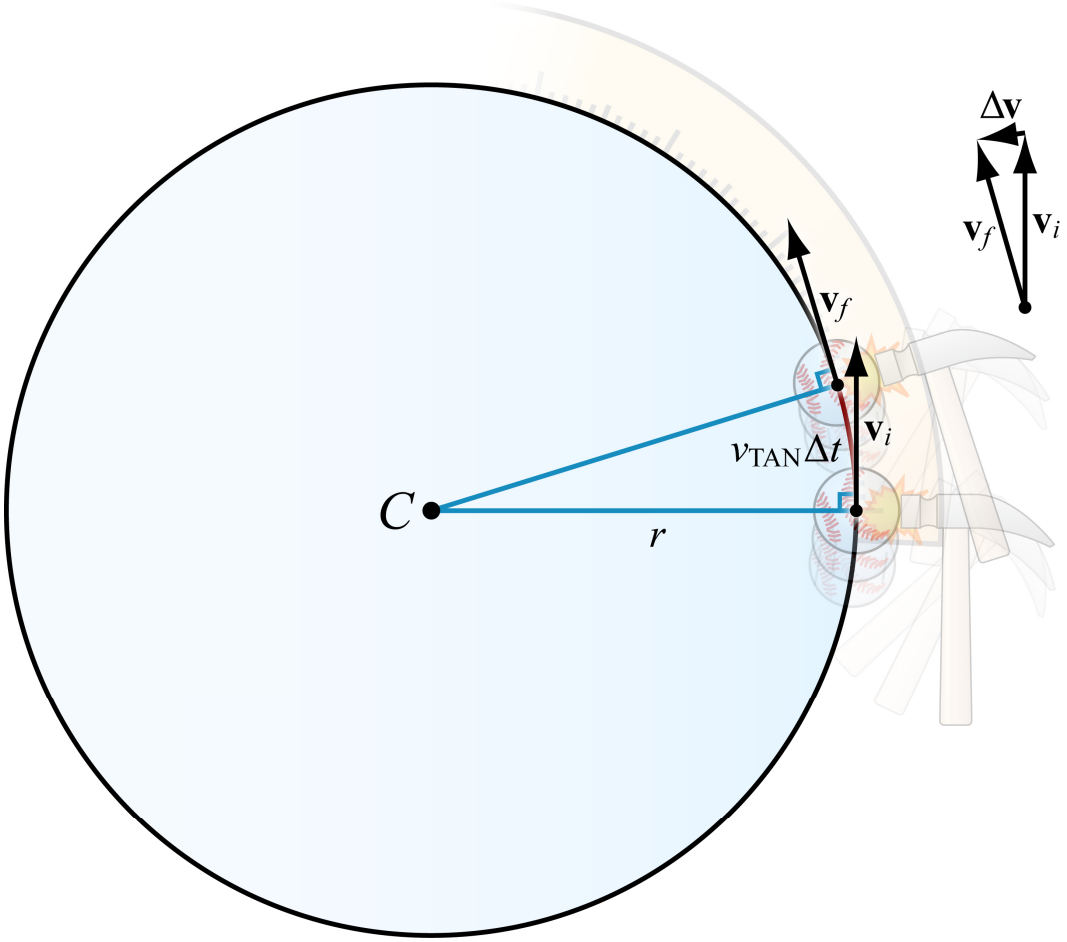
Uniform circular motion



Kinematics

r	radius
$c = 2\pi r$	circumference
T	period (lap time)
$f = \frac{1}{T}$	frequency $\quad [f] = \frac{1}{\text{s}} = \text{Hz}$
$\omega = 2\pi f$	angular frequency
$v_{\text{TAN}} = \frac{c}{T} = \frac{2\pi r}{T}$	tangential speed
$a_{\text{IN}} = \frac{v_{\text{TAN}}^2}{r}$	inward (centripetal) acceleration

Dynamics

$\Sigma F_{\text{IN}} = ma_{\text{IN}}$	**net** of inward (centripetal) force components