$v^2 - v_0^2 = 2ax$

$N = mg$

$f_{max} = \mu N$

$f' = \mu' N$

運動量 $= mv$ [kg · m/s]

力積 $= F\Delta t = mv - mv_0$ [N · s]

$m_A v_A + m_B v_B = m_A v_A{}' + m_B v_B{}'$

$e = -\dfrac{v'}{v}$

$W = Fx$ [J]

$P = \dfrac{W}{t}$ [W]

$K = \dfrac{1}{2}mv^2$ [J]

$U_{\text{重力}} = mgh$ [J]

$U_{\text{弾性力}} = \dfrac{1}{2}kx^2$ [J]

$E = K + U =$ 一定

$W = E - E_0$ [J]

$n = \dfrac{1}{T}$ [Hz]

$\omega = 2\pi n$ [rad/s]

$v = r\omega$ [m/s]

$a = r\omega^2$ [m/s^2]

$F = mr\omega^2$ [N]

$x = A\sin\omega t$ [m]

$v = A\omega\cos\omega t$ [m/s]

$a = -A\omega^2\sin\omega t = -\omega^2 x$ [m/s^2]

$F = -m\omega^2 x = -Kx$ [N]

$\omega = \sqrt{\dfrac{K}{m}}$ [rad/s]