What causes motion? PH 111

#1 - Object at rest stays at rest
Object in motion keeps moving in a straight line until acted upon by an external force
$\Sigma F = 0 \quad a = 0$

#2 - $\alpha = F_{net}/m$
$\Sigma \vec{F} = m\vec{a}$

#3 - Every action has equal and opposite reaction
$F_2 = -F_1$
Different objects

Weight $w = mg$

$F = ma$

1 newton $N = 1\,kg \cdot 1\,m/s^2$	SI
1 dyne $= 1\,g \cdot 1\,cm/s^2$	cgs
1 lb $= 1$ slug $\cdot 1\,ft/s^2$	conventional
1 poundal $= 1$ lb $\cdot 1\,ft/s^2$	