1 Force and Motion

1.1 Chapter I

Units of Measurement

Quantity	Unit	Formula
Force	$[N] = Newton$	$N = Kg * \frac{m}{s^2}$

Newton's laws

Law	States
First law	$\vec{F}_{net} = 0 \iff v = const$
Second law	$\vec{F}_{net} = m\vec{a}$
Third law	$\vec{F}_{AB} = -\vec{F}_{BA}$

1.2 Chapter II

Friction

Type	Formula
Static friction	$f_{s,max} = \mu_s F_N$
Kinetic friction	$f_k = \mu_k F_N$

Uniform Circular Motion

Quantity	Formula
Acceleration	$a = \frac{v^2}{R}$
Force	$F = m\frac{v^2}{R}$