

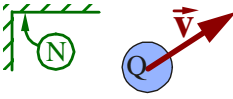
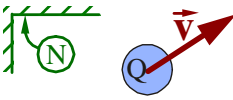


Particle vocabulary: Concept, Calculate, Context

Word	Picture	Symbol & Definition	Relationship to Force/Moment	When useful
Mass		m_Q or m^Q Standard 1 kg mass. Avagadro's number.	$\mathbf{F}^Q = m^Q \mathbf{N} \mathbf{a}^Q$	Statics, dynamics, gravity, momentum, energy, inertia,
Center of mass		S_{cm}	$\mathbf{F}^S = m^S \mathbf{N} \mathbf{a}^{S_{cm}}$	Statics, dynamics, gravity, momentum, energy, inertia,
Kinetic Energy				Conservation of energy, work/energy principle, power/energy-rate principle, Lagrange mechanics.
Translational Momentum				Collisions and explosions. Conservation of translational momentum. Translational momentum principle.
Angular Momentum (moment of momentum)				Collisions and explosions. Conservation of angular momentum. Angular momentum principle.