Translational Mechanics Symbols Used in This Book

Symbols that are **boldfaced** refer to vector quantities that have both a magnitude and a direction. Symbols that are *italicized* refer to quantities with only a magnitude. Symbols that are neither are usually units.

Symbol	Quantity
a, a	acceleration
a$_g$	free-fall acceleration (acceleration due to gravity)
d, d	displacement
FΔt	impulse
F$_g$, F_g	gravitational force (weight)
F$_k$, F_k	force of kinetic friction
F$_n$, F_n	normal force
F$_{net}$, F_{net}	net force
F$_R$, F_R	force of air resistance
F$_s$, F_s	force of static friction
F$_{s,max}$, $F_{s,max}$	maximum force of static friction
h	height
k	spring constant
KE	kinetic energy
KE_{trans}	translational kinetic energy
MA	mechanical advantage
ME	mechanical energy (sum of all kinetic and potential energies)
μ_k	(Greek *mu*) coefficient of kinetic friction
μ_s	(Greek *mu*) coefficient of static friction
P	power
p, p	momentum
PE	potential energy
$PE_{elastic}$	elastic potential energy
PE_g	gravitational potential energy
r	separation between point masses
v, v	velocity or speed
W	work
$W_{friction}$	work done by a frictional force (or work required to overcome a frictional force)
W_{net}	net work done
Δ**x**, Δx	displacement in the x direction
Δ**y**, Δy	displacement in the y direction