Physics

CH 6

CH 7

Kinetic

* Angle does not affect velocity and therefore kinetic energy
* A baseball thrown from a roof at 51.3 above horizontal and 51.3 below horizontal will have the same final velocity.

Conservative Forces

* Gravity and spring force
  + Expressed in potential energy
  + Reversible
  + Independent of path between points
  + Zero if starting and ending points are the same

CH 8

Linear momentum

* P = mv
* Sum of forces = dp / dt
* Time derivative of linear momentum is the net force on the object

Impulse

* J = F \* time interval
* J = integral (F dt ) for a time dependent force

Impulse Momentum Theorem

* Change in momentum = j

Compare momentum and kinetic

* W = Sum forces \* displacement
* J = Sum forces \* time
* Time effects impulse, not Kinetic