We used Energy to inventory the Motion of objects

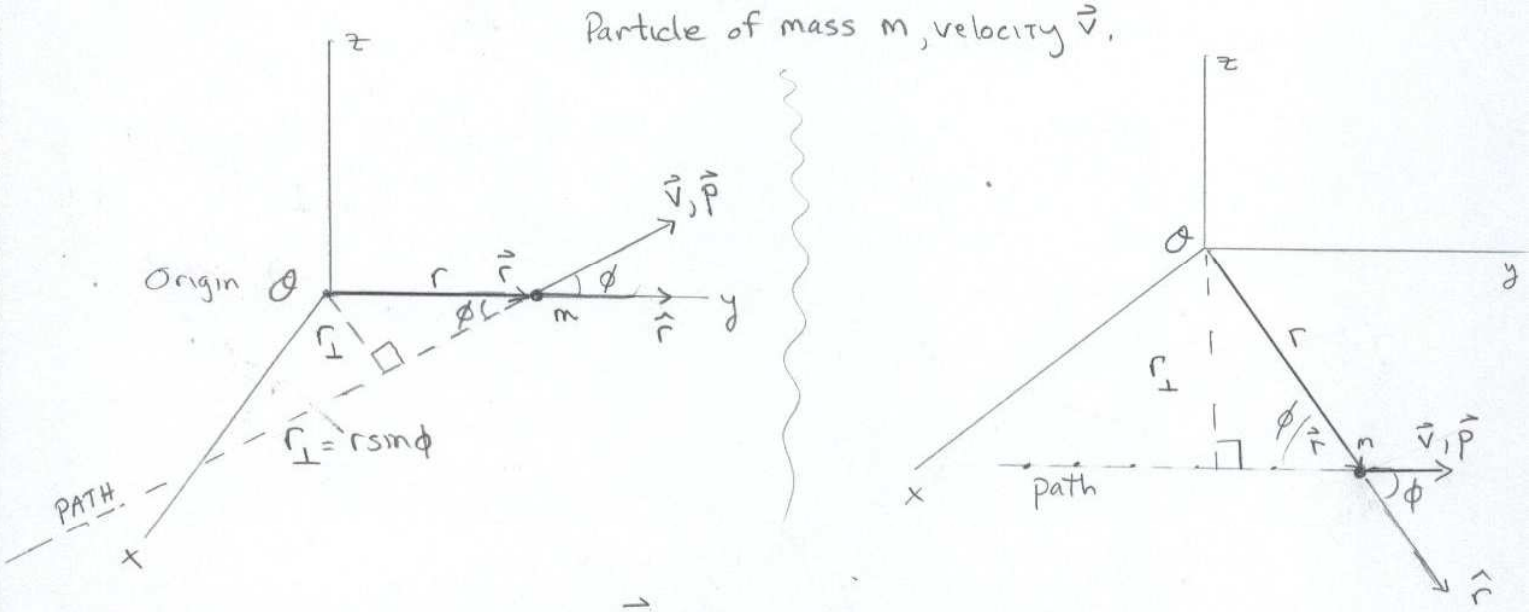
" " Linear Momentum " Linear Collisions.

We use Angular Momentum to inventory rotational collisions.

Whereas _____ is the rotational Equivalent of Force,

Angular Momentum " " " " Linear Momentum.

Particle of mass m, velocity $\vec{v}$.



The angular Momentum $\vec{L}$ of the particle about the origin O is:

$$\vec{L} = \vec{r} \times \vec{p}, \text{ where } |\vec{L}| = rp\sin(\vec{r}, \vec{p})$$

UNITS: $kg\frac{m^2}{s}$ or $J \cdot s$

$$L = rp\sin\phi = pr\sin\phi = pr_\perp$$

(Direction of $\vec{L}$?)