## Summary: Angular impulse/momentum equation 2

FUNDAMENTAL equation:

$$
\left(\vec{H}_{O}\right)_{2}=\left(\vec{H}_{O}\right)_{1}+\int_{1}^{2} \sum \vec{M}_{O} d t
$$

where O is a FIXED point.


WHEN should I use this equation? Think centralforce problems... When $\sum \vec{M}_{O}=\overrightarrow{0}$, angular momentum about O is conserved.

> central force problem: force F acts directly toward point 0


IMPORTANT: This equation can NOT give information on the radial component of velocity for the particle. Why? Why is this important?
Look at the above equation for computing angular momentum. Typically, use work/energy for the additional equation.

