How is $\vec{L}$ RELATED to $\vec{\tau}$?

Guess: $\Sigma \vec{F} = \frac{d\vec{p}}{dt}$

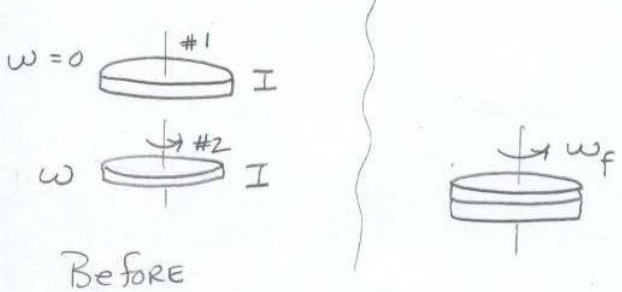
maybe... $\Sigma \vec{\tau} = \frac{d\vec{L}}{dt}$?

* $\vec{L} = I\vec{\omega}$ do $\frac{d}{dt}$

$$\frac{d\vec{L}}{dt} = I\frac{d\vec{\omega}}{dt} \Rightarrow \frac{d\vec{L}}{dt} = I\vec{\alpha}, \text{ but } I\vec{\alpha} = \Sigma\vec{\tau},$$

so $$\Sigma \vec{\tau}_{ext_A} = \frac{d\vec{L}_A}{dt}$$

In Lab:



Is the Angular Momentum of Disk #1 conserved? Disk #2?