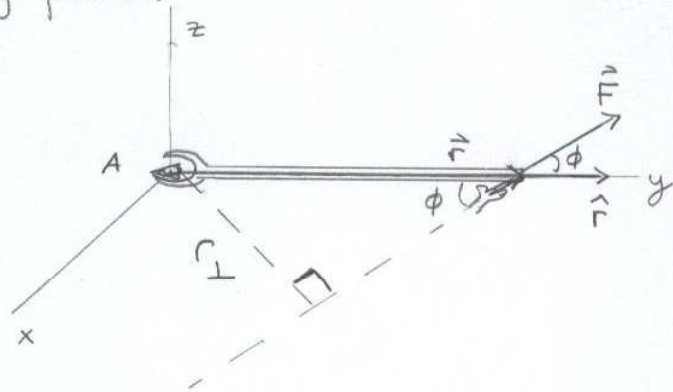
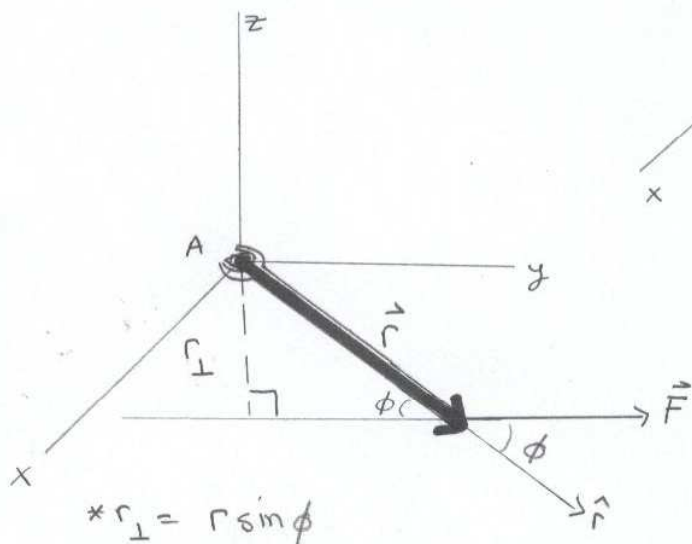


Torque Revisited

10-1

Consider a wrench in the xy -plane.

\vec{r} & \vec{F} are also in the xy -plane.



$$\text{Recall } \tau_A = F r_{\perp} = F r \sin \phi = r F \sin \phi$$

$$\text{or } \tau_A = r F \sin(\vec{r}, \vec{F})$$

The Torque $\vec{\tau}$ about axis ∇A due to \vec{F} is a vector that is \perp to the plane containing \vec{r} & \vec{F} . The vector $\vec{\tau}$ can be found using the vector cross product.