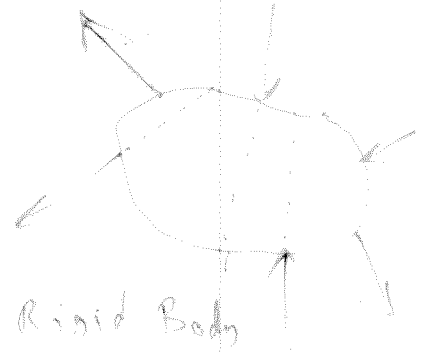
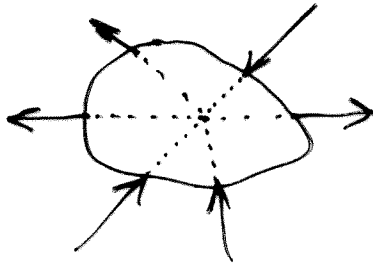


# Moment of a Force

## Scalar Formulation

\* Particle vs. Rigid Body

→ Particle



Rigid body ⇒

Forces do not meet at one point

⇒ Body has a tendency to rotate.

⇒ Moment

Moment : Scalar Formulation

Moment = Force  $\times$  Arm

$$M_p = F \times d$$

$d$  is  $\perp$  to the  
line of action of  $\underline{F}$ .

$$M_o = F d$$

$$= F_x y + F_y x$$

$M$  is about  $z$  (or) axis

counterclockwise  $\curvearrowright$   
CCW  
 $\oplus$

CW  $\curvearrowleft$   
clockwise  
 $\ominus$

2-D

