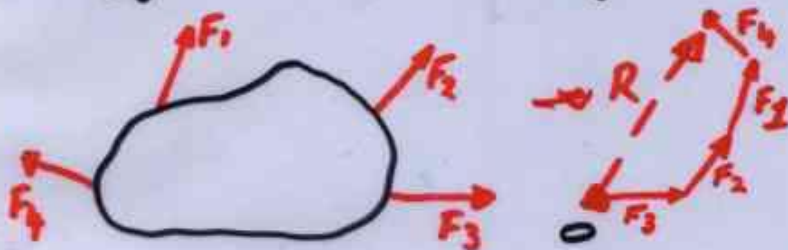


# RESULTANTS:

concepts already covered: FORCE, MOMENT, COUPLE

Now: we want to describe effect of a system of forces & couples

FOR multiple forces, we can use force polygon (like triangle rule)



$\vec{R}$  is the RESULTANT.

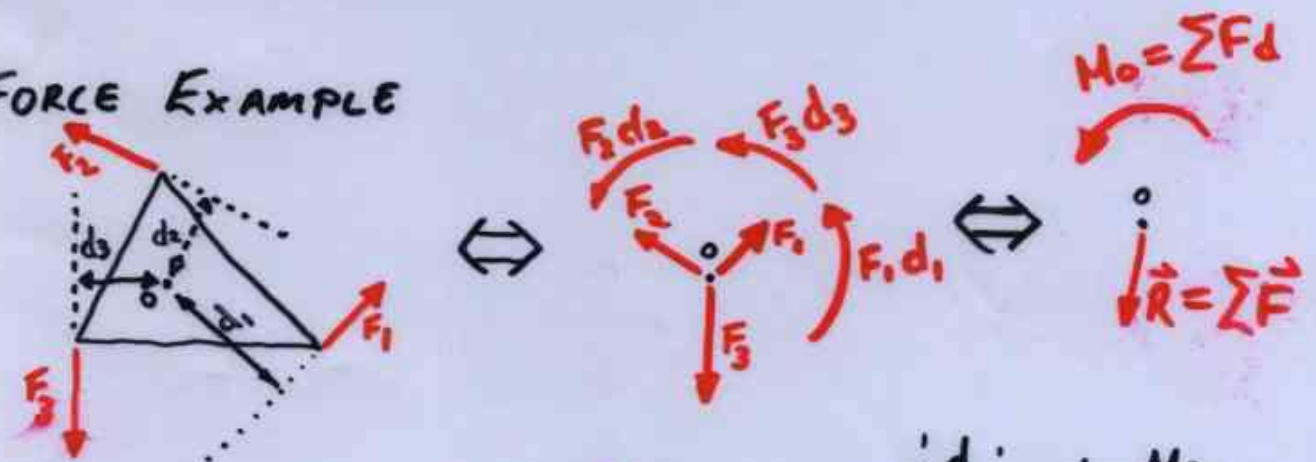
gives magnitude and DIRECTION

ORDER OF ADDITION DOES NOT MATTER.

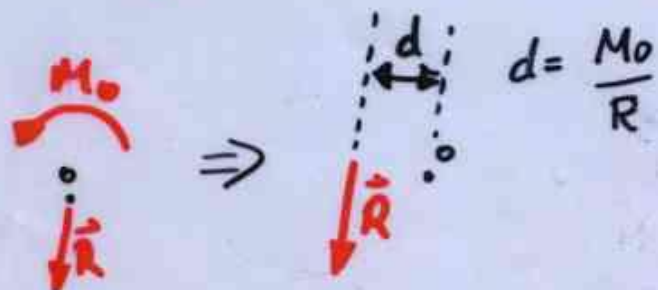
TO GET LINE-OF-ACTION WE MUST MOVE FORCES TO A CONVENIENT REFERENCE POINT

USING FORCE COUPLE SYSTEMS.

## 3 FORCE EXAMPLE



FINALLY, can eliminate couple by moving force:



Choose pt. "o" carefully to make life easier