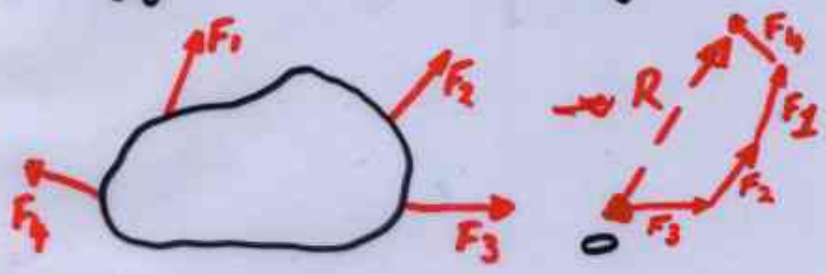


RESULTANTS:

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)



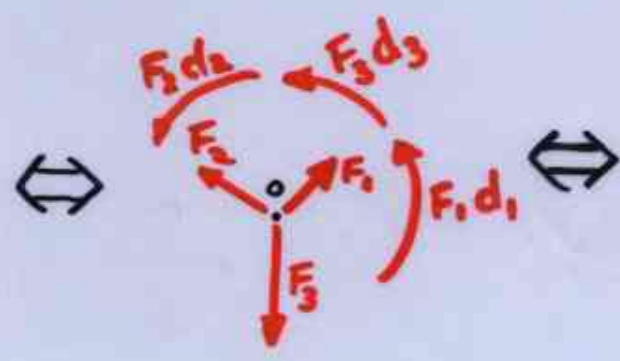
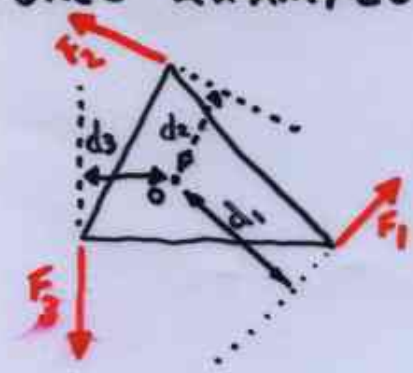
\vec{R} IS THE RESULTANT.

GIVES MAGNITUDE AND DIRECTION

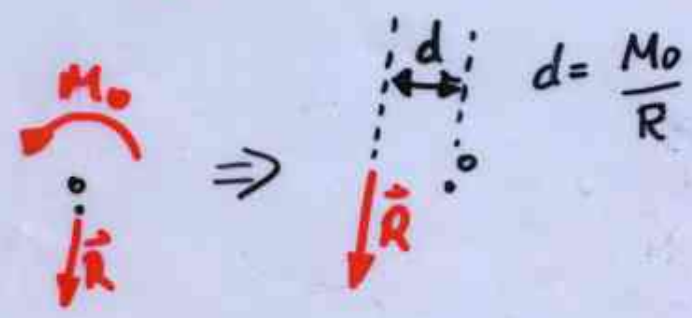
ORDER OF ADDITION DOES NOT MATTER.

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