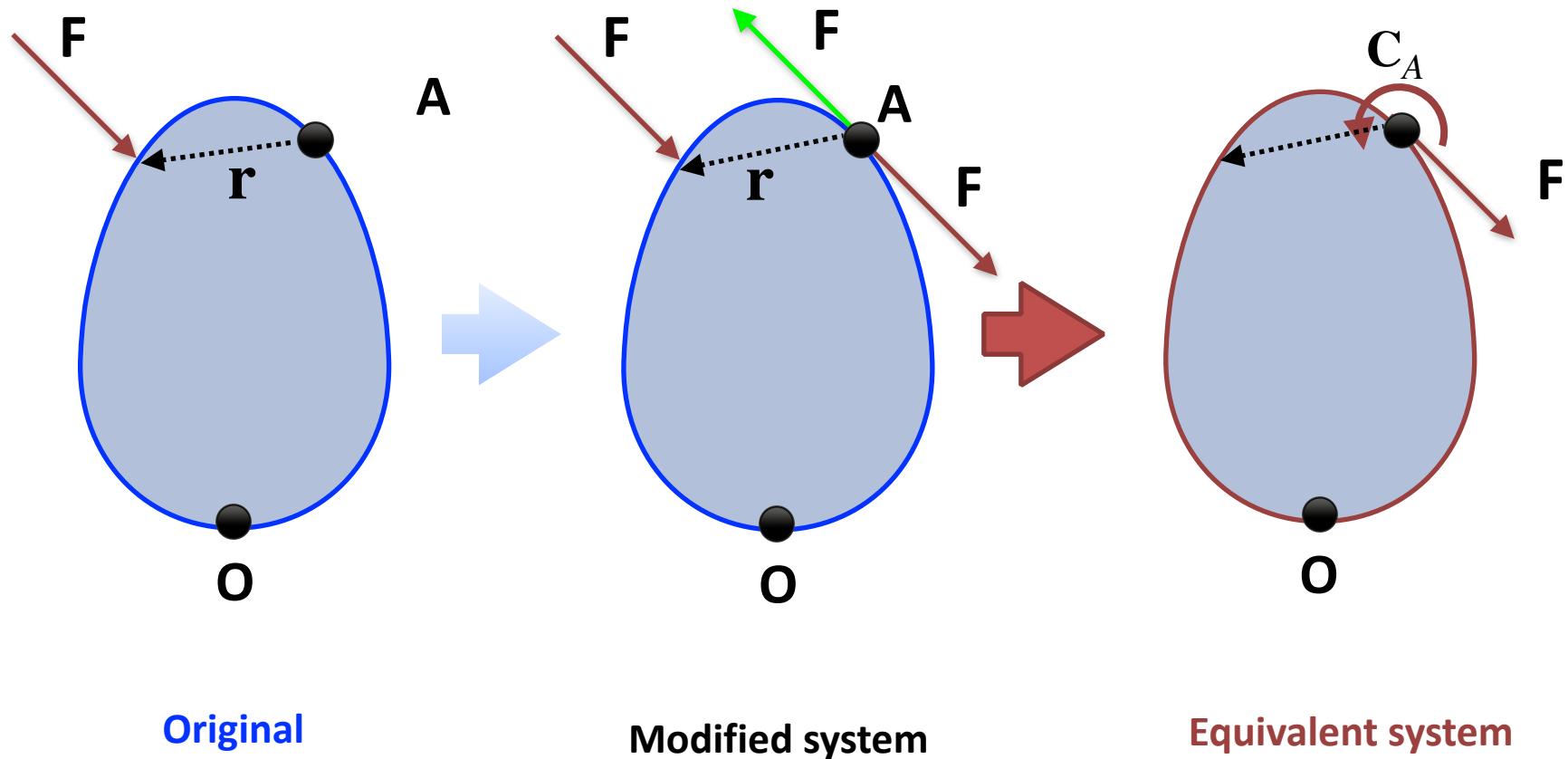


Simplification of Forces and Couples

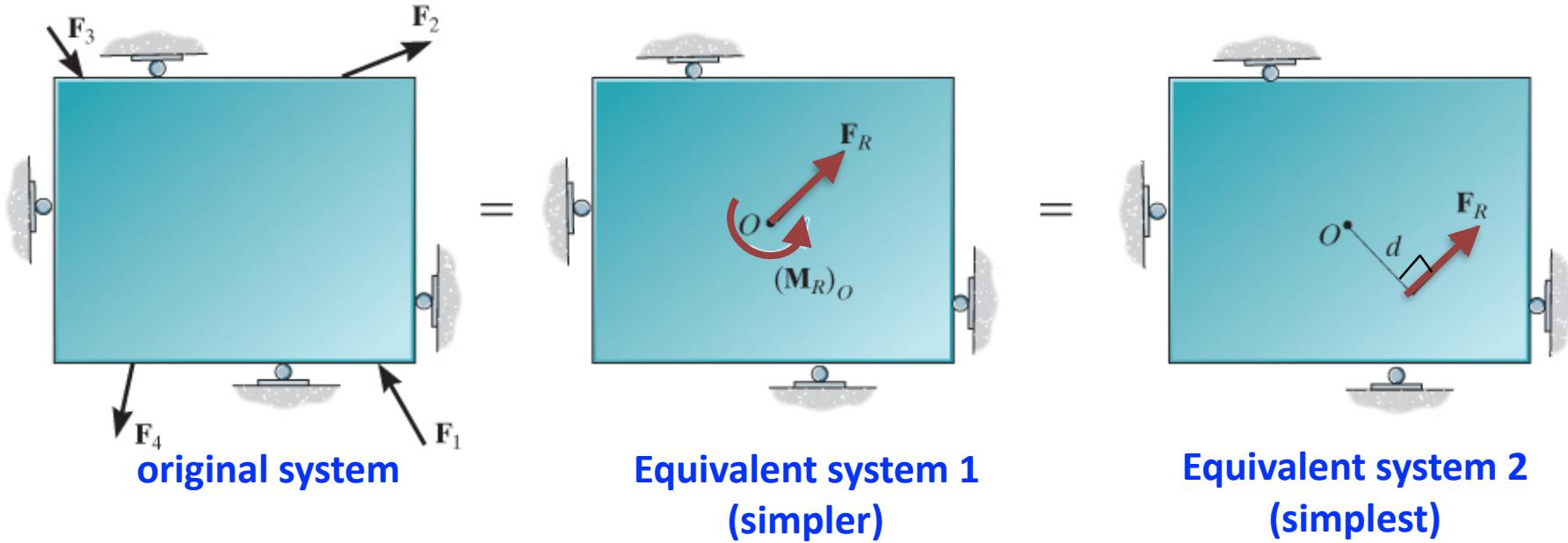
- We can even place anywhere the equivalent force-moment system.
(Changing the line of action of applied force)



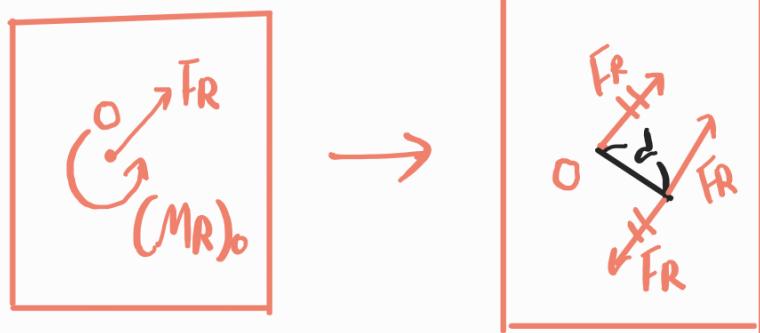
Further Simplification

Coplanar Force System (공평면력계)

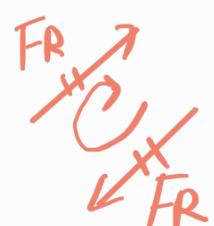
All the lines of action lie in a same plane. (coplanar forces)



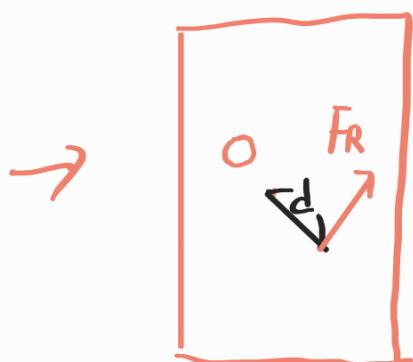
- Equivalent system 1: a single force and a couple moment at O
- Equivalent system 2: a single force at a specific distance from O (the simplest equivalent system)



여기서 F_R 의 힘의 반대방향이
시계 방향과
시계 방향의



couple moment를
만들 다음 원래 기준에
있던 $\uparrow(M_R)_o$ 과
서로 상쇄되어 사라진다.



따라서 Single force
로 Equivalent System 2
(simplest) 만들 수
있다.