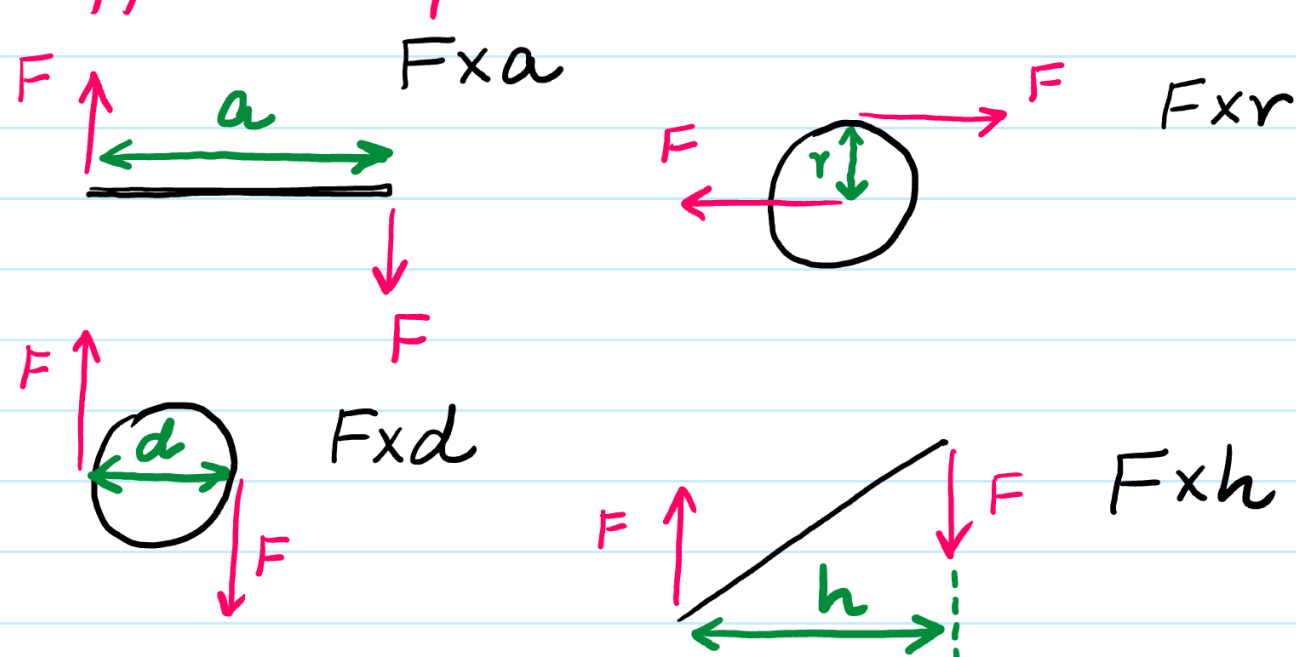


Concept of Turning effect of a **COUPLE** also called Torque of a **COUPLE**

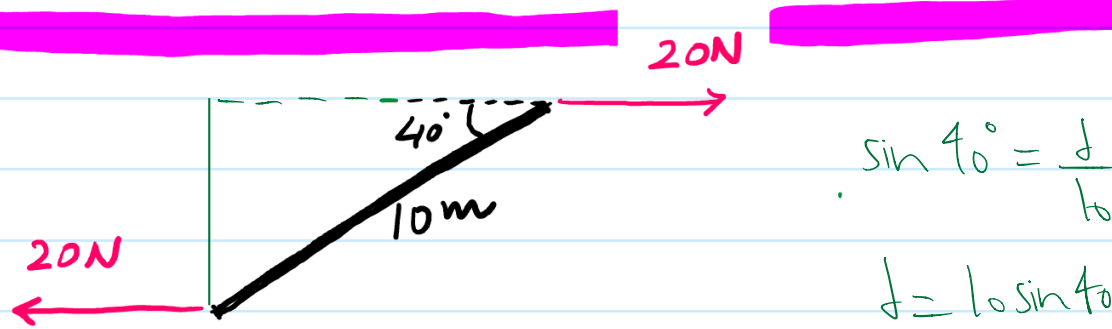
define the term Couple \therefore Couple refers to **Two EQUAL** and **antiparallel forces** acting on an object at **different points**



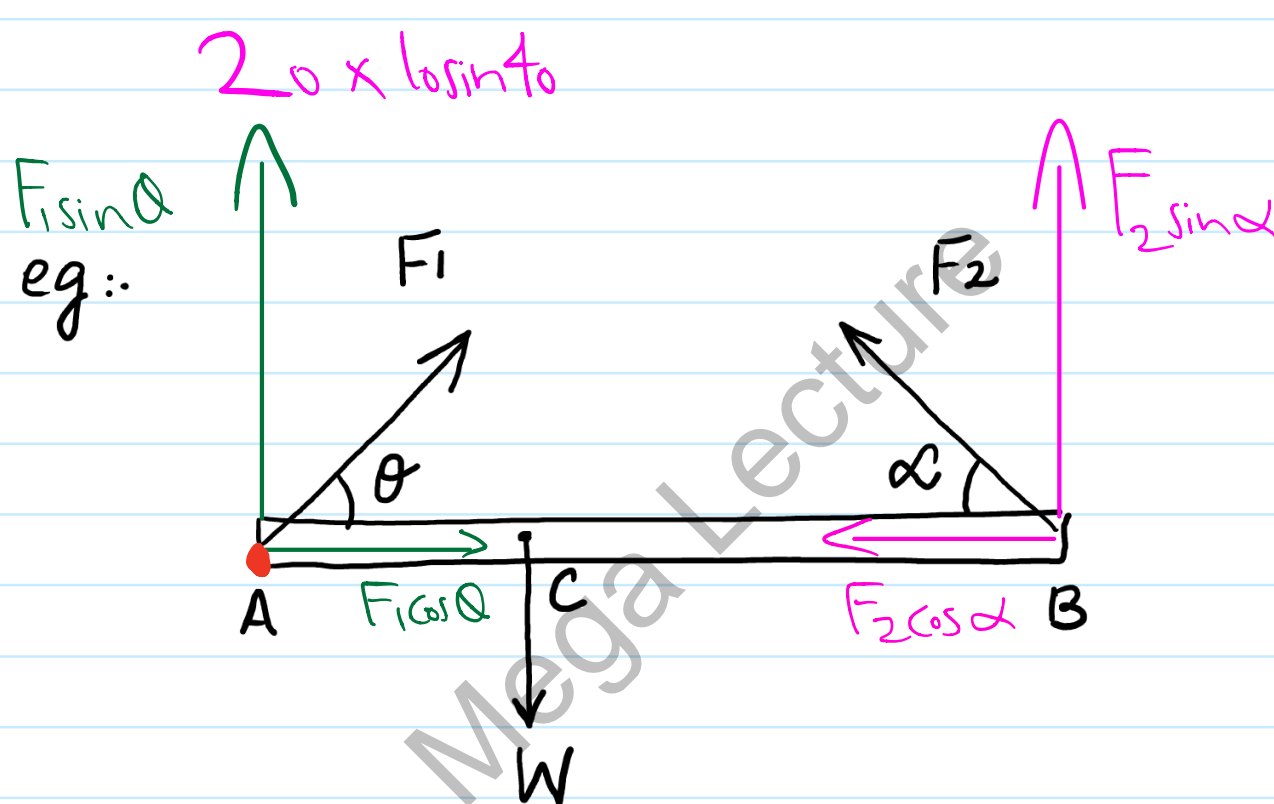
How to calculate Turning effect of a couple also called Torque of a couple.

Torque of a Couple = Any one force multiplied by the perpendicular distance b/w the two forces.

do ye till here.



Cal Torque of a Couple.



$AC = \frac{1}{3} AB$

Given that rod is in **EQ**.

(i) form an Equation only in terms of **Forces** (in the **vertical plane**)

$$F_2 \sin \alpha + F_1 \sin \theta = W$$

(ii) form an Equation only in terms of **Forces** (in the **horizontal plane**)

$$F_1 \cos \theta = F_2 \cos \alpha$$

(iii) form an Equation by applying Principle of moments about the point A.

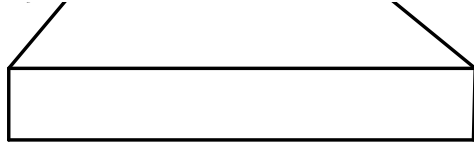
Taking A as pivot

$$W \times AC = F_2 \sin \alpha \times AB$$

CW ACW

$$W \times \frac{1}{3} AB = F_2 \sin \alpha \times AB$$

$$W = 3 \times F_2 \sin \alpha$$



Mega Lecture