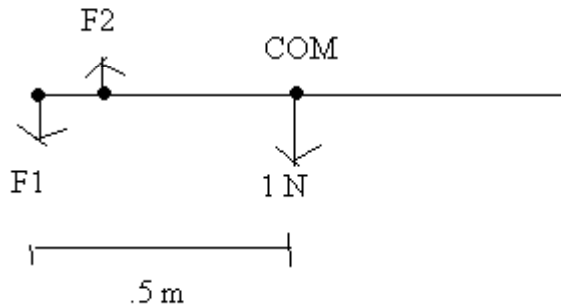


Class Notes 10/17/08

Center of mass (COM) the point at which we can consider all of the mass of an object to exist.

$$\Sigma F_x = 0 \quad \Sigma F_y = 0 \quad \Sigma T = 0$$



*Choose an unknown force as the point of rotations, giving you one less torque to figure out.

F_2 is point of rotation

$$F_2 r_2 - (1\text{ N})(r_2) = 0$$

$$F_2(.1\text{ m}) - (1\text{ N})(.5\text{ m}) = 0$$

$$F_2(.1\text{ m}) = .5\text{ Nm}$$

$$F_2 = 5\text{ N}$$

$$F_2 - (F_1 + 1\text{ N}) = 0$$

$$5\text{ N} - F_1 - 1\text{ N} = 0$$

$$4\text{ N} = F_1$$

F_1 is point of rotation

$$F_1(.1\text{ m}) - (1\text{ N})(.4\text{ m}) = 0$$

$$F_1(.1\text{ m}) = .4\text{ Nm}$$

$$F_1 = 4\text{ N}$$