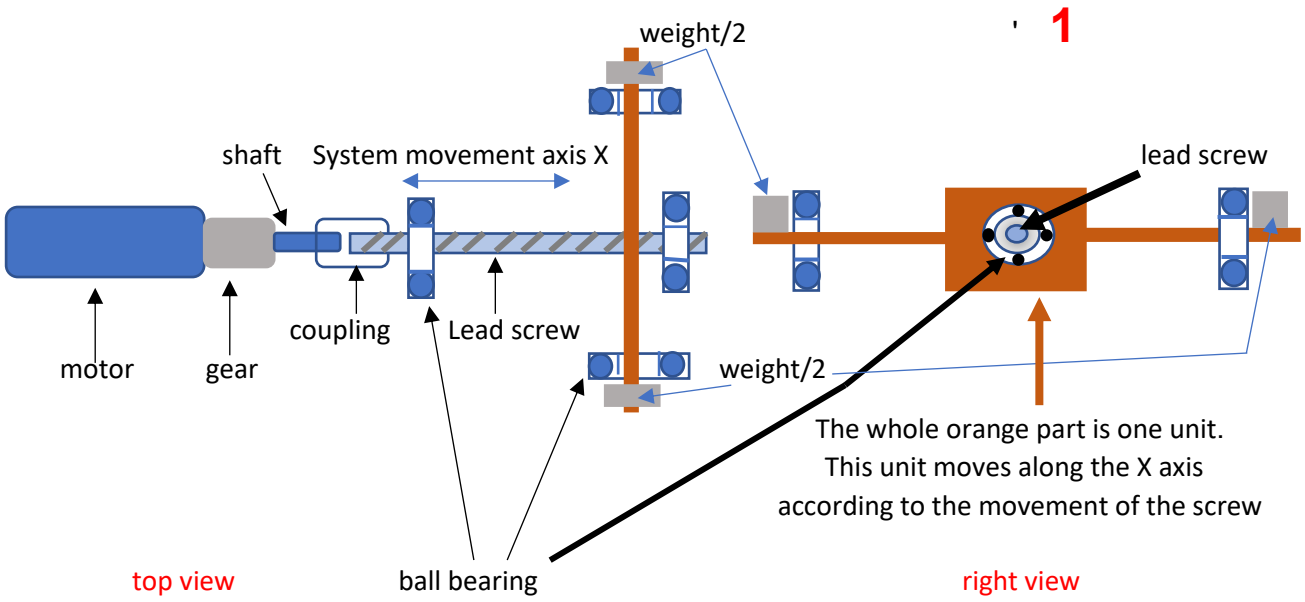
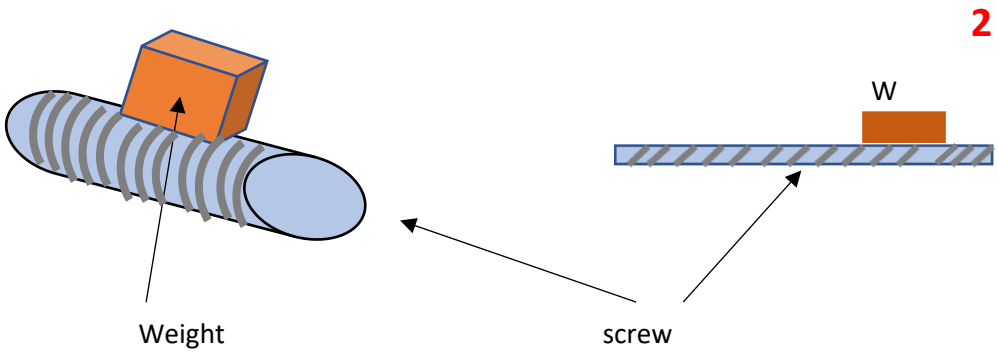



The orange part don't rotate around the screw .

it's moved only at axis X . The screw attracts and reject it

How do I calculate the moment inertia .when the system is this (#1) ?



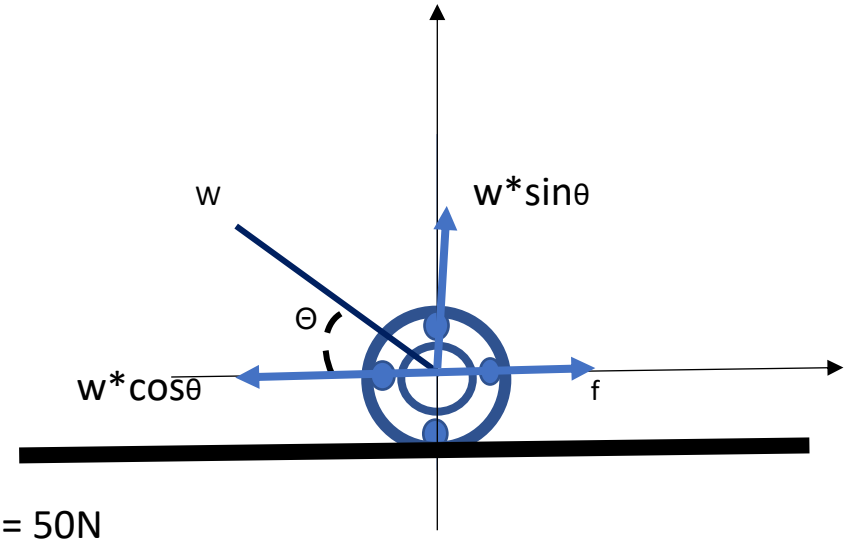

The system moment inertia is : $J_t = J_{screw} + J_{weight}$

$J_{screw}$ from datasheet

$J_{weight} = m * (L/(2*pi))^2$

M=masa [ Kg ]

L= lead screw [m] from datasheet




m=5(Kg)*9.81(m/sec^2)= 50N

μ= 0.15 - 0.09

a= acceleration screw

**<u>w - this is the weight to be attached screw ?</u>**

ΣFy=0 w*sinθ*g=N

ΣFx=m*a w*cosθ - f =ma

f= μ*N = μ* w*sinθ*g

w*cosθ - μ* W*sinθ*g =ma

w* cosθ =m*a+μ*W*g *sinθ =50*a+ 50* μ*sinθ

w* cosθ Is it the weight component that the power screw feels