Prelab  Rotational Inertia

The following concepts are related with this week’s lab. Briefly define and explain them using your words.

1. Torque

2. Moment of Inertia (Definition and Equation)

3. Find the moment of inertia of following objects. Ignore the mass of bars and m is a point mass. (ignore the spherical shape)

4. 

5.
[Experiment Plan]

The figures below show the Rotational Motion Sensor (RMS) mounted on a support rod, with the thin rod and masses attached. An external pulley (Super Pulley in Figs. 1.1 and 1.2) is clamped onto the side with a mass hanging from a string that is placed across the super pulley and attached to the pulley of the RMS. The string is tied a distance \( r \) from the axis of rotation.

Draw a vector diagram to show the direction of the torque acting on the pulley of the rotary motion sensor. [Use Figure 1.2]