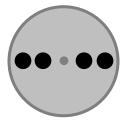
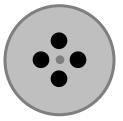
## MOMENT OF INERTIA DEPENDS ON MASS DISTRIBUTION

• The Moment of Inertia has to do with how mass is *distributed* on an object or system, relative to the axis of rotation.

<u>EXAMPLE</u>: A solid disc has small masses arranged on it in two different ways. In which of the following will the Moment of Inertia of the system, about a central axis perpendicular to the disc, be greater?







## PRACTICE: MOMENT OF INERTIA / MASS DISTRIBUTION

<u>PRACTICE</u>: The objects below all have the same mass and radius. Mass is distributed evenly in all objects. Rank the objects according to the Moment of Inertia they each have about a central axis perpendicular to them, highest to lowest.



