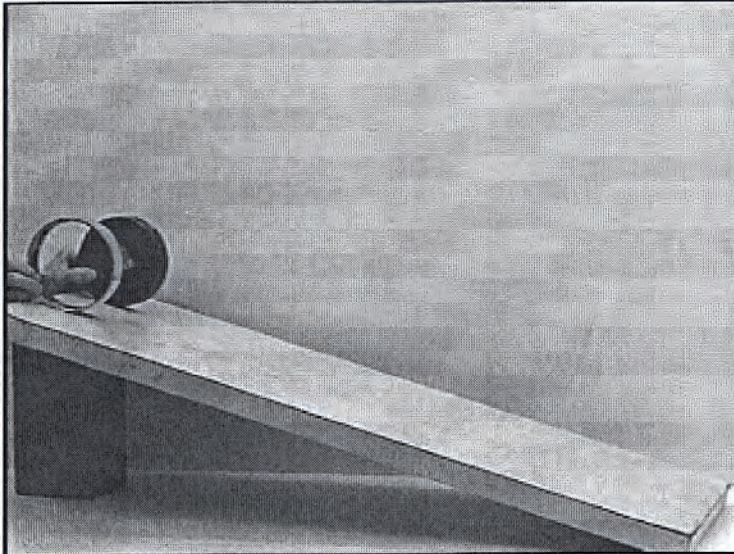


RING AND DISK MOMENT OF INERTIA APPARATUS

N235-3479-00



Purpose: To demonstrate the effect of moment of inertia on the acceleration of bodies rolling down an inclined plane. To illustrate the dependence of angular acceleration on the moment of inertia. Observe the effect the moment of inertia has on the motion of rolling objects.

Description: "Race" a rolling ring(disk) and sphere of the same diameter and mass down an incline ramp. Line all objects at the top of the ramp, using a meter stick or hold them in place.

A solid disk and a thin ring having the same mass and the same radius roll down an incline starting at rest from the same position. The object with the greater moment of inertia, in this case the ring, rolls more slowly.

If the disk and ring are released together at the top of the plane, the disk will arrive at the bottom of the plane first since its moment of inertia ($1/2 mr^2$) is half the bottom of the ring (mr^2). The disk and ring are of equal mass.

Suggestions: Let students vote on the outcome: Ring, disk, or tie - before doing the experiment.

Equipment: Ring, Disk
Diameter: 15cm (~6 inches)
Height: 5cm (~2 inches)

SHIPPING WEIGHT AND DIMENSIONS

31cm x 16cm x 6cm (L x W x H)

Gross Weight: 1350g

Manual of Operations

IMPORTANT!

Read the following before using this equipment:

Carefully follow all instructions and observe all precautions given in this manual

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