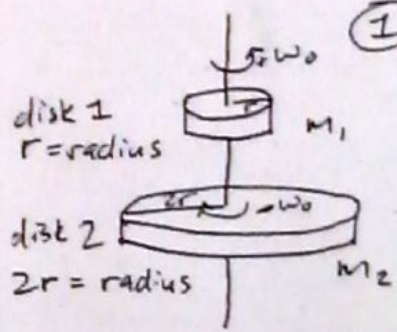


Conservation of Momentum Activity 1 Name: _____



① The bottom disk is raised until it makes contact with the top disk. Eventually the two disks reach a common angular velocity. There are no external torques.

r: _____ ω_0 : _____ $m_1 = m_2$

a.) What is the angular momentum total initially of the system?

b.) What is the final angular momentum of the system?

c.) Set final angular momentum equal to final momentum and solve for ω_f .

② A turntable has 5 times the mass of a record. If the turntable is already spinning and the record is at rest, how fast is the system spinning after the record is dropped onto the turntable?

$m_{\text{Record}} = \frac{1}{5} m_{\text{Turntable}}$

$I = \frac{1}{2} M R^2$
 $R_1 = R_2$

