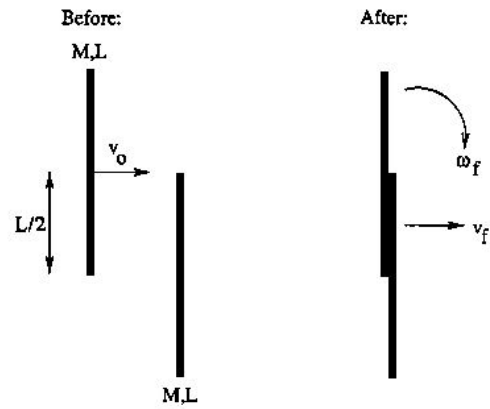


QP15



Two equal, uniform, thin rigid rods of length L and mass M collide and stick together, making a composite rod of length $3L/2$. Initially, one rod is at rest while the other approaches with speed v_0 perpendicular to both rods.

- (1 point) What is the velocity of the center of mass after the collision?
- (2 points) Find the moment of inertia I_c for the composite rod about its center of mass.
- (2 points) After the collision, what is the angular velocity ω_f of the composite rod about its center of mass?