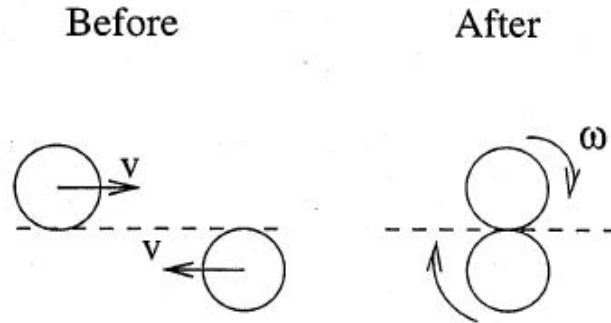**QP24**

Two cylindrical pucks, each of mass M and radius R slide towards each other on a smooth frictionless surface. Initially, each has speed v. They undergo a grazing collision and stick together at their edge.

Before   After

a) (1 point) What is the combined angular momentum of the two pucks about their mutual center of mass before the collision?

b) (1 point) What is the combined moment of interia of the two pucks about their mutual center of mass after the collision?

c) (2 points) What is ω, the angular speed of the two pucks about their mutual center of mass after the collision?

d) (1 point) What fraction of the original energy is lost to heat duing the collision?