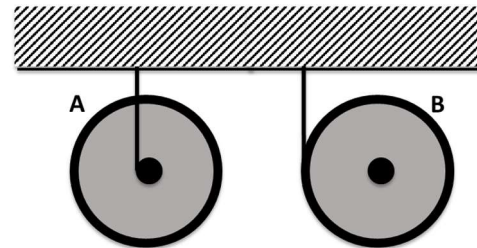


Assessment #7 Klay/Schwartz

- 1) (problem 2 is on the other side) At right, you see two identical disks. Both disks have 1 m of string wound around them, but for A, the string is wrapped around a thin, central axle, while for B, the string is wrapped around the circumference of the disk itself. The disks are released from rest at the moment you see. Please compare between A and B (which is larger or are they the same.... with good explanation):

- the final rotational velocities of the two disks
- time it takes the disks to get to the bottom
- the tension in the strings



- 2) We had a homework problem dedicated to finding the moment of inertia of this tapered disk, at right top, which has a moment of inertia of  $0.3MR^2$ . At right below, please see a different disk design that is thin in the middle and flared at the edges. Without doing any calculus, please estimate what you think the moment of inertia of this “flared” disk would be. You will be given the moment of inertia for several objects for reference.

