

Your Name _____ Section _____

HOMEWORK #9 - 8.01 MIT - Prof. Kowalski

Due 4:00PM Thursday Nov. 06, 2003

Topics: Rigid Body Rotation and Angular Momentum

Any following problems designated with a bold number indicate problems from Young and Freedman 11th edition.

1. **9.78**
2. **9.80**
3. **9.86** Do not solve this problem with the numerical values of the masses given – call the masses M_4 , M_2 , and M_p (for the pulley)
 - a) Find the speed asked for in the problem
 - b) Find the magnitude of the acceleration of the masses expressed in the units of g .
 - c) Find the magnitude of the acceleration of the masses in the case than $M_p = 0$ (i.e. for the case of the perfect pulley which you solved for earlier).
 - d) Exhibit a problem with two perfect pulleys and three connected (by strings) masses that has the same acceleration as the masses in this problem.
4. **10.35**