

Your Name \_\_\_\_\_ Section \_\_\_\_\_

**HOMEWORK #10 - 8.01 MIT - Prof. Kowalski**

**Due 4:00PM Thursday Nov. 13, 2003**

**Topics: Angular Energy and Angular Momentum**

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

**1. 10.70**

- b. Draw a picture showing the angle of the string that will not result in any motion of the yo-yo if the string is pulled gently.
- c. Find this angle in terms of  $R$  and  $r$ , the radii of the yo-yo and its shaft respectively
- d. What will happen if the tension in the string is increased at this angle?

**2. 10.78**

**3. 10.87**

**4. 10.101**