

Physics 1101 Experiment 4 Homework

NAME \_\_\_\_\_

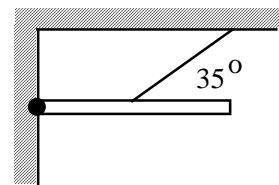
1. What two conditions must be met for an object to be in equilibrium?

2. What is meant by the “center of mass” of an object?

3. Do you think the center of mass of the torque bar used in the revised Experiment 4 is at the center of the bar? If not, to which end is it the closest, L or R and why? (Refer to the figure in the revised Experiment 4 to answer this question.)

4. What is meant by the term “lever arm?”

5. For the 0.8-m long, 1.2-kg iron bar shown in the figure, calculate the torque produced by the tension in the string about the pivot at the left end of the bar. The string is attached at the center of the bar, which is the center of mass of the bar.



NOTE: You should answer questions 1 and 3 in the revised Experiment 4 before coming to class.