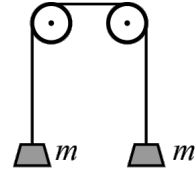


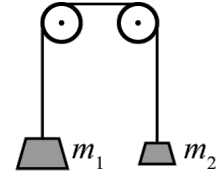
Name: \_\_\_\_\_

## LAB 5 PRE-LAB

1. If two equal masses are suspended from either end of a string passing over a massless, frictionless pulley (an Atwood machine), what kind of motion do you expect to occur? Why?



2. Suppose two *unequal* masses are suspended from the string of an Atwood machine.



- a. What motion do you expect to occur?
- b. Why do the two masses have the same magnitude of acceleration?
- c. Write a formula for the acceleration of the masses in terms of  $m_1$ ,  $m_2$ , and  $g$ .
- d. How would you expect the acceleration to change if you move mass from the light side to the heavy side, keeping the total mass constant?
- e. How would you expect the acceleration to change if you increase the mass of both sides by the same amount?