LAB REPORT WRITE-UP

For the arrangement at the right,

1. Which tensional force(s) would create what is called counter-clockwise torques?

2. What tensional force(s) would create what is called clockwise torques?

3. If T₁ = 50 N, what is the torque for this tensional force? ____________ Nm.

4. If T₂ = 40 N, what is the torque for this tensional force? ____________ Nm.

5. What would T₃ have to be for this system to be in equilibrium? T₃ = ____________ N.

For this figure, assume the meterstick is uniform and that the pivot is located at the 1 cm position.

6. Is the torque created by the weight of the meterstick a clockwise or counter-clockwise torque?

7. Is the torque created by the tension in the string a clockwise or counter-clockwise torque?

8. If the string is attached to the meterstick at the 98 cm mark and is tied to the vertical rod 75 cm above the pivot, what would be the tension in the string for a meterstick whose
mass is 78 g?

For the figure at the right, assume that the rotational inertia and friction is so small that it can be ignored.

9. What kind of torque (CW or CCW) is the tension in the string connected to mass A?

by the tension in the string connected to mass B?

10. If mass A and mass B are equal in mass, what is the net torque on the pulley?

11. What would be the graphs if A is given a gentle pull downward and then released?

What would the torque graph be for this same case?
12. If mass A is of larger mass than mass B, what is the net torque on the pulley?

13. What would be the graphs if A is given a gentle pull downward and then released?

What would the torque graph be for this same case?

14. What would be the graphs if B is given a gentle pull downward and then released (for mass A of greater mass than mass B)?
What would the torque graph be for this same case?