

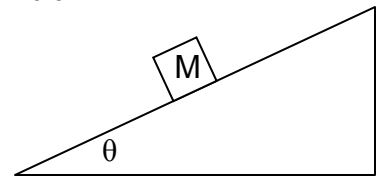
Name: _____ Lab Section: _____ Date: _____

PreLab: Friction

Instructions: Prepare for this lab activity by answering the questions below. Note that this is a **PreLab**. It must be turned in at the start of the lab period. Time cannot be given in lab to perform PreLab activities. After the start of lab activities, PreLabs cannot be accepted. Explain your answers. Points will be taken off if your work is not neat and well organized.

1. (5 points) How is coefficient of static friction different from coefficient of kinetic friction? Explain in detail.

2. (5 points) Compute the normal force on the block. $M = 38.8 \text{ kg}$ and $\theta = 26.5^\circ$
You must show your work to get credit.



3. (5 points/1408/3 points 1420) In step 2 of the procedure, you are instructed to adjust the pulley so the string is parallel to the track. Why is it important to keep the string parallel? Explain in detail.

4. (1420 ONLY 2 points) Find the first derivative of $f(x) = (\cos x + 7)/(x + \sin x)$