PHYS 201L Pre-Lab for Friction Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Read section 4.9, pages 103-109, in your text (Cutnell & Johnson 7th) and answer the following questions:

1. Discuss the pros and cons of friction.
2. What are “cold welds”?
3. What is the direction of the frictional force on a moving object (circle one)?  
   a. In the direction of the velocity of the object  
   b. In the direction opposite to the velocity of the object
4. You pull horizontally on a block in a floor. The block does not move. Sketch the floor and block. Show and name all the forces acting on the block.
5. You push horizontally on a heavy crate. The crate does not move. Which of the following frictional forces balances your push (circle one)?  
   a. Static frictional force  
   b. Kinetic frictional force
6. You push horizontally on a heavy crate. The crate moves. Which of the following frictional forces acting on the crate (circle one)?  
   a. Static frictional force  
   b. Kinetic frictional force
7. Express the magnitude of the kinetic frictional force (*fk*) in terms of the coefficient of kinetic friction (*μk*) and the magnitude of the normal force (*FN*).