1. Lab #3 section III

2. A car sits on a drawbridge as it starts to open. The car has a mass of 800 kg, and the bridge surface has coefficients of friction of $\mu_s = 0.8$, $\mu_k = 0.3$.
   
   (a) Determine how far the bridge must open (what angle) before the car starts to slide down.
   
   (b) What is the car’s acceleration once it starts to slide?

3. A 100 kg sign is hanging by two ropes that can each support a maximum tension of 500 N before breaking. A flock of seagulls lands on the sign. If each seagull has a mass of 5 kg, how many birds can the sign safely support before the ropes snap?

4. Chapter 5, problem 55