Physics 3210, Spring 2019

- 1. A block moves up a 45° incline with a constant speed under a force of 15 N applied parallel to the incline. If $\mu_k = 0.3$, what (a) weight and (b) minimum force parallel to the incline allow it to move down the incline at constant speed?
- 2. On the "Roto" amusement park ride, riders would stand inside a cylinder which would start spinning. When the Roto was spinning fast enough, the riders would "stick" to the wall and the floor would fall out. If the coefficient of static friction $\mu_s = 0.4$, and the radius of



the Roto is 8 meters, what is the minimum rate of rotation in revolutions/minute which is required in order to hold the riders to the wall?