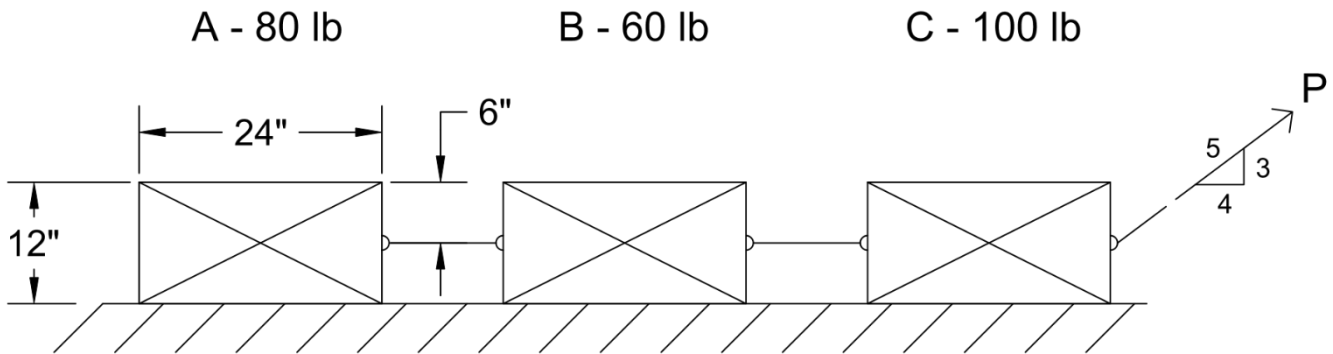1. Blocks A, B, and C are connected by ropes and the blocks weigh 80 lb., 60 lb., and 100 lb., respectively. The coefficient of static friction between the blocks and the surface is $\mu_s = 0.4$.
   a. Draw a FBD of each block
   b. Determine the maximum force P that can be applied without causing the blocks to move.

2. The coefficient of static friction between all surfaces of contact is $\mu_s = 0.32$. The crate weighs 50 kg.
   a. Draw a FBD of the crate
   b. Draw a FBD of the wedge
   c. Is the wedge self-locking? (In other words, is there sufficient frictional force to keep the crate in equilibrium?)
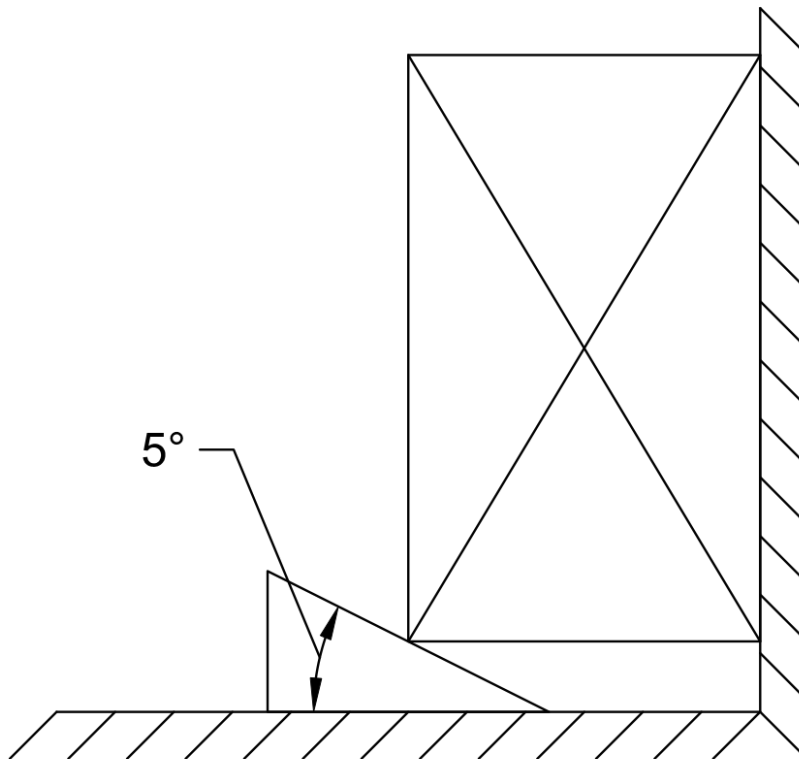
3. The coefficient of static friction between all surfaces of contact is $\mu_s = 0.25$. The crate weighs 100 kg.
    a. Draw a FBD of the crate
    b. Draw a FBD of the wedge
    c. Determine the force P that must be applied to the wedge in order to lift the block
    d. Determine the force P which must act in the opposite direction that must be applied in order to lower the block