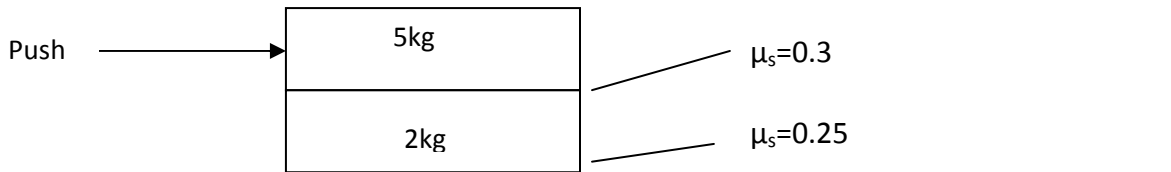
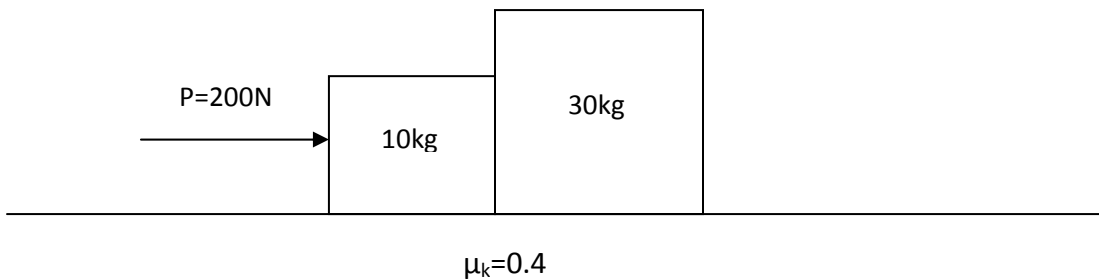


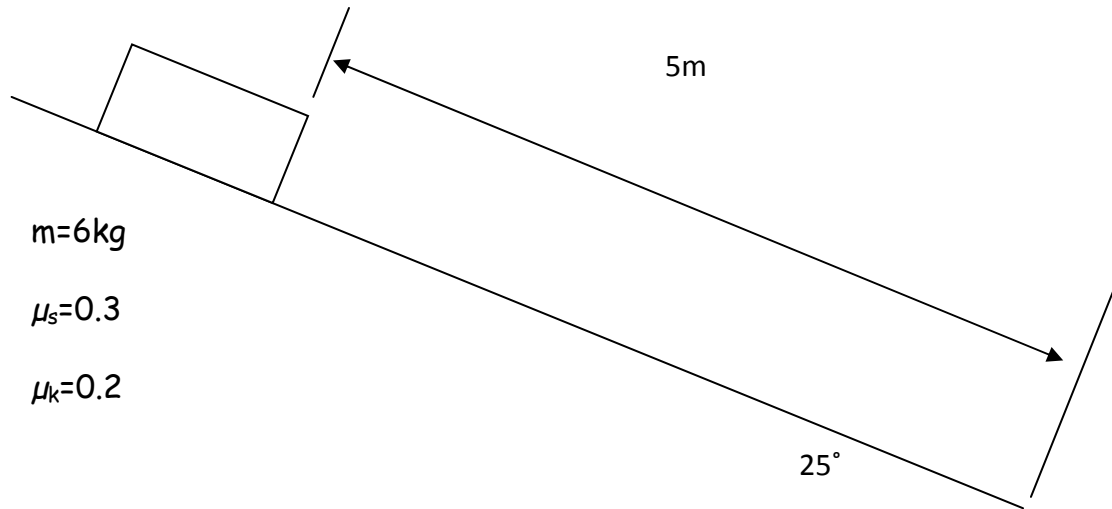
- 1) Imagine the situation below. You are pushing on the top block. Which block will slide first, the top one or the bottom one? Draw a force diagram for each block. Give a clear rationale for your answer.



- 2) In the figure below, two blocks are being pushed to the right by a constant force 'P'. Draw a force diagram for each block and:
- Calculate the acceleration of each block
 - Calculate all forces on each block
 - Identify all action/reaction pairs



- 3) In the figure below, a wooden block is released from rest on a smooth incline. Calculate how long it will take the block to reach the bottom of the incline.



- 4) A fan cart, like the one shown in class, is released from rest on a smooth, horizontal, aluminum track (assume no friction). The cart has a mass of 1.0kg , and it takes the cart 1.5 seconds to reach the end of the 2.0m -long track. Now the track is raised to an angle of 5 degrees above horizontal, and the cart is released from rest at the bottom. Calculate how long it will now take the cart to reach the end of the track.