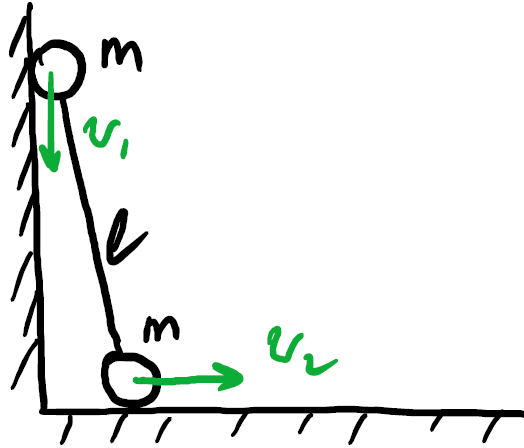Please think on the following problems (we will solve them in the class):

1. A dumbbell slides down as it is shown in figure below. Try to find angle between the dumbbell and the vertical wall at which the upper ball moves off the wall.

2. The ladder of mass M forms angle α with the vertical wall. The upper end of the ladder has no friction, the friction coefficient between the lower end and the wall is m. Find the critical angle α at which the ladder starts sliding.