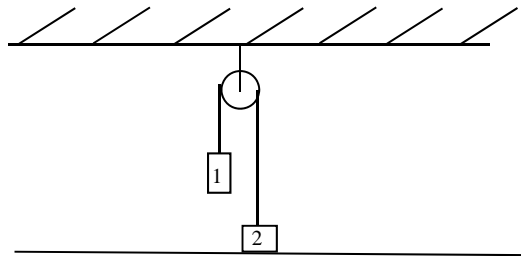


## Energy Problems

- 1) A person slides a box down a ramp. The box starts from rest 2m above the lowest point. The ramp is frictionless. Once the box reaches the bottom there is friction. For every 1m the box travels on the flat part  $E_{\text{int}}$  increases by 100 J. Where does the box stop? The box has mass of 5 kg.



- 2) In the picture below  $m_1$  starts out from rest 1.5m above the ground. The mass of  $m_1$  is 3kg and  $m_2$  is 2kg. How fast is  $m_1$  moving when it hits the ground?



- 3) This problem will require you to make some assumptions, so be sure that your assumptions are clear. You have dinner reservations at Atrio in Brickell, but the elevator is broken. If you decide to take the stairs does that entitle you to eat the entire Chocolate Fondue for Two dessert by yourself? The Chocolate Fondue for Two is 1 lb. of dark chocolate, served with a variety of fruits for dipping.