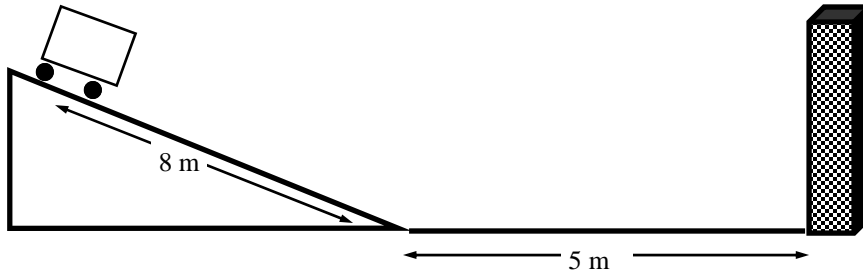
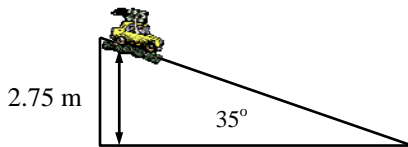


1. How fast are Ralph and his go-cart traveling when they are **halfway** between the bottom of the ramp and the wall? (the ramp is at a 47 degree angle, $\mu = 0.3$ and $V_i = 0$)

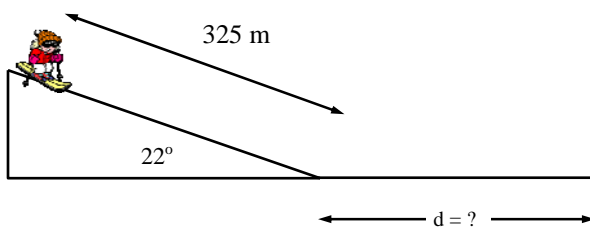


2. A 65 kg base runner begins his slide into second base while moving at a speed of 3.6 m/s. If the coefficient of friction between the runner and the ground is 0.75, how far does he slide before coming to a stop?

3. A 2100 kg car starts from rest at the top of a 35 degree driveway that is 2.75 m high. If the car's speed at the bottom of the driveway is 3.8 m/s, what is the coefficient of friction?



4. A skier starts from rest at the top of a 22 degree hill which is 325 m long. The coefficient of friction between the snow and the skis is 0.075. How far does the skier go on level snow before coming to a stop?



5. How high will Ralph and his go-cart slide **up** the 12 degree ramp if they begin with an initial velocity of 25 m/s? ($\mu = 0.03$)

