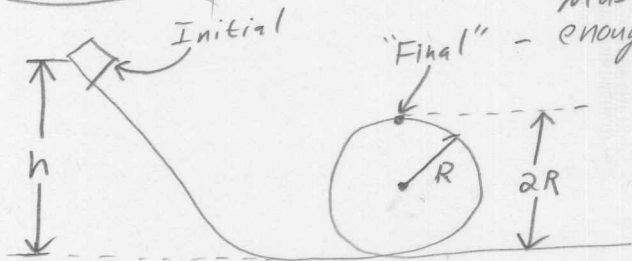
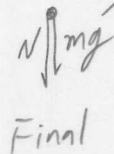
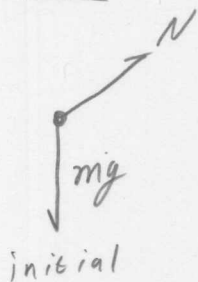


Physics 111  
Homework

Ch7-46



FBD



Newton:  $+N + mg = ma_c$ ,  $a_c = m \frac{v^2}{R}$

Falls when  $N \rightarrow 0$

$$\Rightarrow mg > m \frac{v^2}{R}$$

$$\Rightarrow \text{Falls when: } \underline{v^2 < gR}$$

$$U_I = mgh$$

$$U_F = 2mgR$$

$$K_I = 0$$

$$K_F = \frac{1}{2}mv^2 = \frac{1}{2}mgR$$

Conserve

$$mgh = 2mgR + \frac{1}{2}mgR$$

$$\boxed{h = \frac{5}{2}R}$$