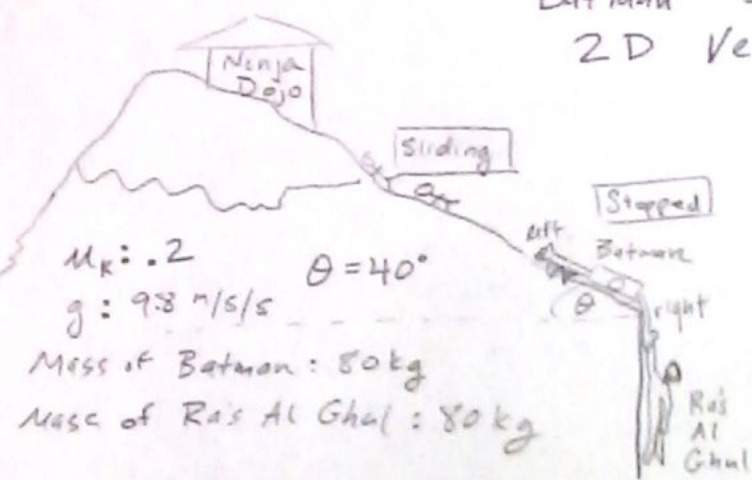


Batman Begins Activity

2D Vector Forces

Name: _____



1) Draw a force diagram for batman & Ra's while sliding:

a.) Batman

b.) Ra's Al Ghul



2.) Write an equation for the net Force "y" on batman alone, while he is sliding.

3.) Write an equation for the net Force "x" on batman while sliding (Remember $F_{\text{friction}} = \mu_k F_{\text{Normal}}$)

4.) Calculate batman's acceleration while sliding.

5.) What is batman's velocity just before he "hooks" the ground? (Assume $v_i = 0$ and he slides for 5 seconds) What is the Δx ?

6.) Draw a force diagram for batman and Ra's when stopped.

a.) Batman

b.) Ra's

7.) When stopped, what is F_{tension} in batman's left arm? $\mu_s = .3$