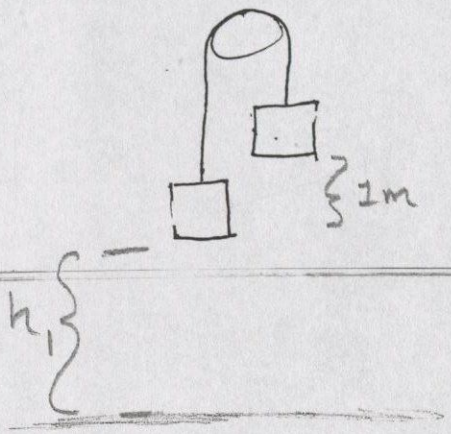
Individual Activity

1) An atwood machine has a ___ kg block hanging right on one side and a ___ kg block on the left side.

right ___
left ___
h_1 ___
$g = 10\ m/s/s$



A.) Find the magnitude of the acceleration of the blocks. a: ___

B.) What is the tension in the string?

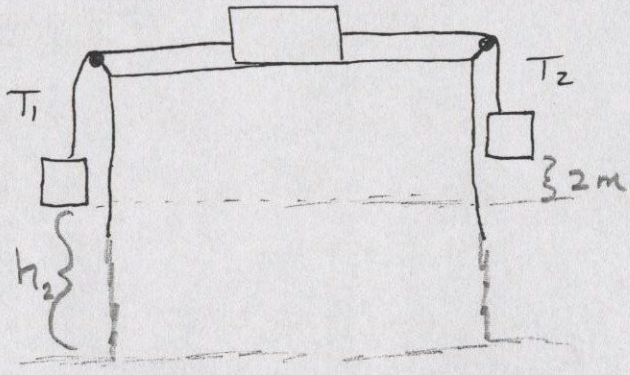
C.) Which direction does the system move?

d.) How much time passes before the system touches the floor?

e.) What is the impact velocity?

2.) Find the tension in each string for the 3 box system:

μ_k = ___
right ___
middle ___
left ___
h_2 ___
$g = 10\ m/s/s$



a.) if there is no friction

b.) if μ_k = ___ between the middle block and table.

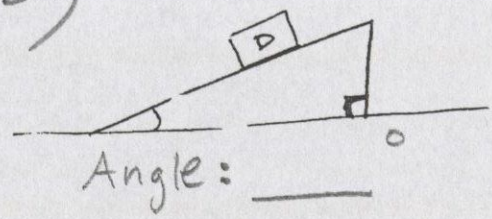
c.) Which direction does the system move?

d.) How much time passes until the system touches the floor?

e.) What is the impact velocity of the system?

All systems begin at rest.

3.)



Block D is on an incline.
It has mass of ____ kg.
Assume $g = 9.8\ m/s^2$

a.) Draw a free body diagram.

b.) What is the normal force or $F_{\perp}$?

c.) What is the parallel force or $F_{\parallel}$?

d.) What is the acceleration of the block?

e.) What would μ_s need to be in order for the block not to accelerate?