Your name: _____

Due date: Next class.

You may work with others on this assignment. I can help if you ask outside of class. (But I won't tell you if your answer is correct or how to do the whole assignment.)

This is to be done as homework. If your ball falls outside of your range lines then you can do this assignment to regain those lost points.

RECORD THIS DATA BEFORE LEAVING THE CLASSROOM		
Average time though the photogate is	_____	
Launch height above the floor is	_____	
Angle the ball is launched with is	_____	above the horizontal.
Actual range to where the ball landed is	_____	

Given the information above work backwards to find:

(1) The initial velocity the ball should have left the launcher with to have landed where is did. (Hint: In your givens table define the initial velocities as $\upsilon_o \sin\theta$ and $\upsilon_o \cos\theta$ where θ is the angle in the box above.)

(2) The diameter the ball should be if it is to go through the photogate, while being launched vertically, with the average time in the box above.

Show your work neatly on a separate sheet of paper. Staple it to this sheet when you turn it in.

ANSWERS:

(1) Initial velocity, υ_o :.... _____

(2) Diameter (m): ..... _____