



Physics

LAB #5: RIGHT ON TARGET

Name: _____

Date: _____

Right on Target

Lab #5

Purpose: To calculate trajectory of a ball. Finding vertical and horizontal times and distances.

Method: Pair up with one other student to form a team. The ball must not leave the table until you are ready to target your grade.

1. Find the speed of the ball by rolling it down a ramp and across the lab table.
What data will you have to measure to calculate the speed?

_____ and _____

How many trials should you average to get a good result? How will you know?

2. What data will you have to collect to *calculate* the time it will take the ball to hit the floor from the time it leaves the lab table?

3. Using the average horizontal speed and the calculated time, *calculate* how far from the table the ball will hit the floor. Show all your work in the space below and then record the answer on the line provided.

Distance from table: _____

4. Take into account the vector for the horizontal velocity of the ball and measure the predicted distance from the edge of the lab table. Place a target paper on the floor in your predicted spot.
5. Call the instructor over to supervise your launch. When given permission to launch, test your work.