

Lab 9-3: 2D Momentum

- Purpose:**
1. To determine if momentum is conserved in a two-dimensional collision.
 2. To determine if kinetic energy is conserved in a two-dimensional collision.

Materials: video of 2 billiard balls colliding

Procedure:

1. Use Logger Pro to analyze a video of two billiard balls colliding. (Look at an old lab if you don't remember how to do that.)
2. Once you are set up, track the ball that is initially in motion for the whole video. Then, click on the button that says "Set active point" and then choose "Add Point Series." Rewind the video to the start and then track the ball that is initially at rest.
3. For your data, include any relevant Logger Pro graphs along with any relevant information from those graphs. Please make sure this is all neat and readable.
4. For your analysis, explain what you did with the video, show your calculations and discuss the two objectives in the lab.
5. For your conclusion, give a 1 or 2 sentence summary of what you did/found.

Data:

Analysis:

Conclusion: