

Linear Momentum

Name _____ Date _____

Source Notes:

This lab was modeled after the “Conservation of Momentum: Internal Force” lab #15
“Laboratory Physics”, Murphy Doyle, Merrill, 1990.
ISBN 0-675-02477-3

This lab was modeled after
Experiment P14: Collision – Impulse & Momentum
(Force Sensor, Motion Sensor)
Created by Pasco for their Science Workshop Software in 1996

Jim Haine - Wissahickon High School, Ambler PA.
1997(?)
Modified 2010

Teacher Notes:

This single page version for collisions is often given to the students twice; once for a Pasco collision track and again with an air track set up.

Modifications:

Linear Momentum

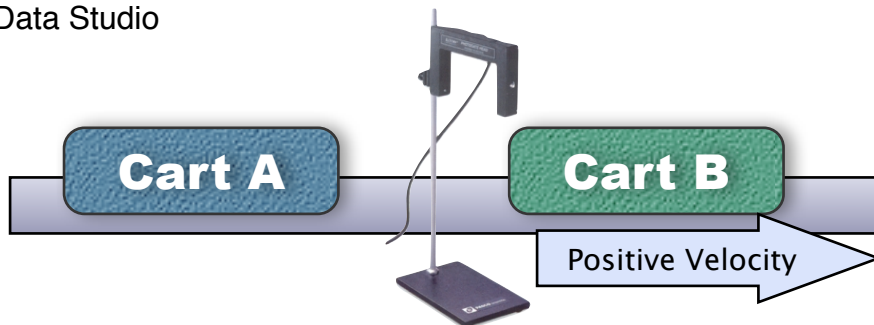
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Complete the table below using Data Studio

$$p = mv$$

Momentum = Mass x Velocity

$$\text{kgm/s} = \text{kg} \times \text{m/s}$$



Trial	Description	M_A	M_B	V_{AI}	V_{BI}	V_{AF}	V_{BF}
1							
2							
3							
4							
5							
6							

Calculations:

Calculate the initial and final momentum of each cart for each trial.

Compare the initial and final totals.

Trial	P_{AI}	P_{BI}	P_{AF}	P_{BF}	Initial P	Final P	Error %
1							
2							
3							
4							
5							
6							