Student Name: Michael Liebel	Jata Sneet
Team members:	2
Instructor: Michael liebel	4
One Dimensional Collisions Length of the sail: (cm)	

Table 1.- Columns left to right indicate collision type, car's mass and the time required to travel the length of the sail. The subindices 1 and 2 indicate car number, while i and f refer to the initial and final states. X stands for "not required".

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Collision Type	m_1 (g)	m_2 (g)	t_{1i} (s)	t_{1f} (s)	t_{2f} (s)	$t_{2f} + t_{1f}$ (s)
Perfectly Elastic	300.5	300.0	0.1975	X	0.7281	Х
Partially Elastic	401.0	200.5	0.2142	0.3669	0.3026	0.6695
Totally Inelastic	700.0	199.5	0.1899	0.4182	X	х

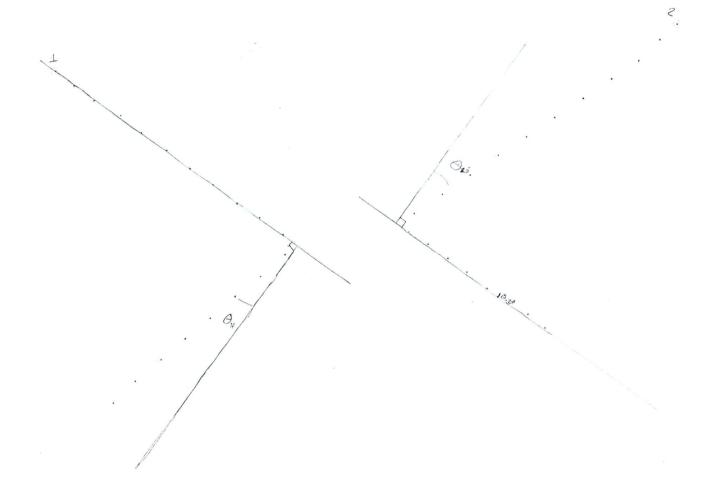
Two Dimensional Elastic Collisions

Frequency of the sparks: 20 (Hz)
Puck's mass : 556 (g)

Table 2.- Raw data: Δl_1 and Δl_2 are the distances between selected points along each track; θ_1 and θ_2 are the angles between the coordinate axes and the velocity vectors. Note: time is the elapsed time between the selected points.

State	$ \vec{\Delta l_1} $ (cm)	$egin{array}{ccc} heta_1 & ec{\Delta l}_2 \ ext{(degrees)} & ext{(cm)} \end{array}$		$ heta_2$ (degrees)	
Initial	2.0	zero	2.4	21.00	
Final	2.3	13.5°	1.6	1,00	

MAS Oct. 14 2025



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