P1310L, Projectile Motion
Lab 3, Raw Data Sheet

Submitted by: Nova Moore Experiment's date: 9/5/26

Team members:

1.- Nova Moore 2.- _____

3.- _____ 4.- _____

Instructor must initial: NM

Muzzle Velocity

Follow the instructions in section 3.2.1 of the lab manual. Record your measurements in the following table, where d is the distance between main and accessory gate.

Table 1: Muzzle Velocity

Medium Range	time (s)	d (m)	$\mathrm{m\,s^{-1}}$
1	0.0828	2.10	25.36
2	0.055	2.115	38.45
3	0.3285	2.134	6.51
		Average speed =	23.44 m/s
Long Range			
1	0.4104	2.34	5.702
2	0.2121	2.28	10.75
3	0.2501	2.36	9.436
		Average speed =	8.629 m/s

Launch Experiments

Follow the instructions in section 3.2.2 of the manual, record your measurements in the following table and include a sketch of the setup next to the table. Note that your instructor will give you the angles for these experiments.

Table 2: First Launch Data and Setup Sketch

range	
θ (deg)	10
y_0 (cm)	25.5
y_f (cm)	0
$x - x_0$ (cm)	234.95

Table 3: Second Launch Data and Setup Sketch

range	
θ (deg)	10
y_0 (cm)	25.5
y_f (cm)	0
$x - x_0$ (cm)	236.54

Angle of Maximum Range

Follow the instructions in section 3.2.3 of your manual to collect your data and record them in the next table. Unless otherwise indicated, set the launcher to Medium Range. Note that for this exercise,$y_0 = y_f$.

Table 4: Maximum Range Data

θ (degrees)	$x - x_0$ (cm)
40	211.455
45	215.265
50	213.995