# P1310L, Newton's Laws –Part I
# Lab 4, Raw Data Sheet

Submitted by: _____ Experiment's date: _____

Team members:

1.- _____ 2.- _____

3.- _____ 4.- _____

Instructor must initial:_____

## Acceleration Through an Atwood Machine

Record the masses of each trial, and the slope of the velocity curve with appropriate SI units.

Table 1: Atwood Machine Data

| Trial | $m_1$ (g) | $m_2$ (g) | Slope |
|---|---|---|---|
| 1 | | | |
| 2 | | | |
| 3 | | | |

Capture a screen shoot of the velocity vs. time for one of the trials and include it in the next box. Plot(v vs. t) trial __ Slope: _____

# Static Friction on a Horizontal Surface

Do at least 3 trials per surface or as directed by your instructor. Record the type of surface and the maximum force applied, which occurs just before the 2 kg mass started to move.

Table 2: Static Friction Data

| Trial | Surface Type | Maximum Force (g) |
|---|---|---|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |

Capture a screen shoot of the Tension vs. time for one of the trial and include it in the next box. Plot(v vs. t) trial ___ Surface Type _____ Maximum Force: _____

# Kinetic Friction on an Inclined Surface

Table 3: Kinetic Friction Setup

| Mass (g) | Angle (degrees) |
|---|---|
| | |

For each trial record the slope of the velocity curve and indicate the units in the header. Capture a screen shoot of the velocity vs. time for one of the trials and include it in the next box. Plot(v vs. t) trial ___ Slope: _____

Table 4: Kinetic Friction Data

| Trial | slope (  ) |
|---|---|
| 1 | |
| 2 | |
| 3 | |
| 4 | |