

## Galileo's Lab

### Part A:

Objective: To determine the relationship between Distance and Time of a ball rolling down a ramp at a fixed ramp angle.

Data: Time, Distance, Height

Plot Distance vs Time

Plot Distance vs Time<sup>2</sup>

### Part B:

Objective: To determine the relationship between Acceleration and Ramp Angle of a ball rolling down a ramp at a fixed distance.

Data: Time, Distance, Height

Calculations: Acceleration ( $a = 2d / t^2$ )

Plot Acceleration vs Height

Materials:

Safety:

Procedure:

Data:

Calculations:

Graphs:

Conclusion: Paragraph Form; 3<sup>rd</sup> Person Passive Tense

State your Results

What happened to the ball as it traveled down the ramp? Why?

What happened to the ball as you increased the ramp angle? Why?

What do your graphs tell you? Linear or Curved? Slope? Y Intercept?

Error Analysis

What errors were present?

How did those errors affect your results?

Be Specific: How and Why?

Lab Improvements:

What would you do differently if you were to repeat this lab?

How would your improvements change the accuracy and/or precision of this lab?

Be Specific: How and Why?

References: