

Acceleration of Gravity

As you work through the steps in the lab procedure, record your experimental values and the results on this worksheet. Use the exact values you record for your data to make later calculations.

Data and Calculations

Record the distance x between the two pencil marks you have placed on the track.

Record the value of L .

Complete the table.

Table 1

h (cm)	t_1 (s)	t_2 (s)	t_3 (s)	t_4 (s)	t (s)	g (m/s ²)
1						
2						
3						

Analysis

Complete the table.

Table 2

h (cm)	Δt (s)	$\frac{\Delta g}{g}$ (%)	Percent Error (%)
1			
2			
3			

For each h , compare the % uncertainty in Table 2 to the absolute value of the % error. Is your % error smaller than the % uncertainty?

h_1 :

h_2 :

h_3 :

Does one value of h give more accurate results for g ? Explain.