

Name: _____ Partners: _____

LAB: Inclined Plane

Purpose: To determine the relationship between the angle of an inclined plane and the force an object feels when placed on the inclined plane.

Materials: (List all materials that were used to complete the lab exercise.)

- _____
- _____
- _____
- _____

Procedure and Diagram: (Make a rough draft of your procedure and diagram below)

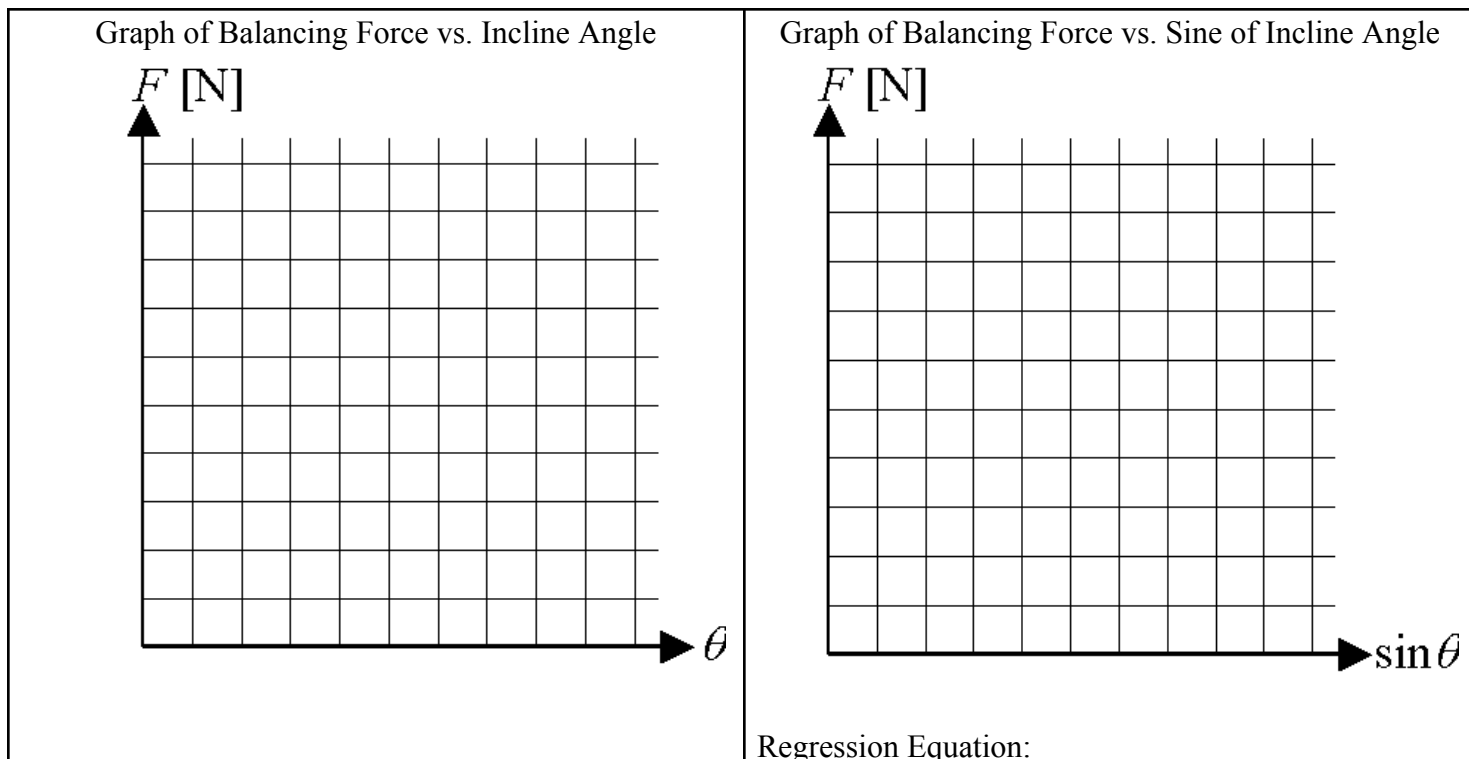
[illegible]

Data Tables: (Fill in these data tables as you complete the lab.)

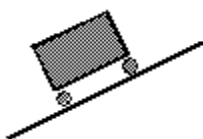
Mass of the Car: $M =$ _____ Weight of the Car: $F_w =$ _____

Angle of Inclination θ [Degrees]	Sine of the Angle of Inclination $\sin \theta$	“Down the Plane” Force F [N]
10		
20		
30		
40		
50		
60		
70		
80		
90		

Graphs: (Plot points that represent the data taken in the data tables. Label the axes with appropriate scales.)



Force Diagram: (Draw and label the forces on the cart used in the lab shown below. Assume the track is FRICTIONLESS.)



Derivation of “Down the Plane” Force (Conclusion):

Error Analysis: State a source of error in your measurements of force and/or angle and explain whether the source of error is systematic or random.

