

## Prelab 5

Below is a chart which has data for an investigation where a large fan cart with various mass loads was run, from rest, for a distance of 1 m on a horizontal track. The cart was run three times with each mass and the time to travel the 1 m was recorded and averaged. The chart has the total mass and the average time for the three runs at that mass.

Time (s)	1.46	1.50	1.64	1.70	1.87	2.04	2.17	2.42
Mass (g)	900	1000	1100	1250	1500	1750	2000	2500

Use this data to determine the accelerations for each total mass. Then graph the acceleration versus mass, acceleration versus 1 over the mass and 1 over the acceleration versus the mass. Use these graphs to determine the relation, if any, between acceleration and mass. You must turn in the graphs with your answer and explain fully how you determined, based on this data, the relation between these two quantities in this case.