Ice Puck Sliding Lab
AP Physics – C

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Instructor: Mrs. Morse

1 Gathered Data

1.

Time [s]	Distance [cm]
0	0
.1	5
.2	13
.3	26
.4	44
.5	66
.6	93
.7	124
.8	159

2. Mass = $420[g]$

3. Angle = $28°$

2 Graphs

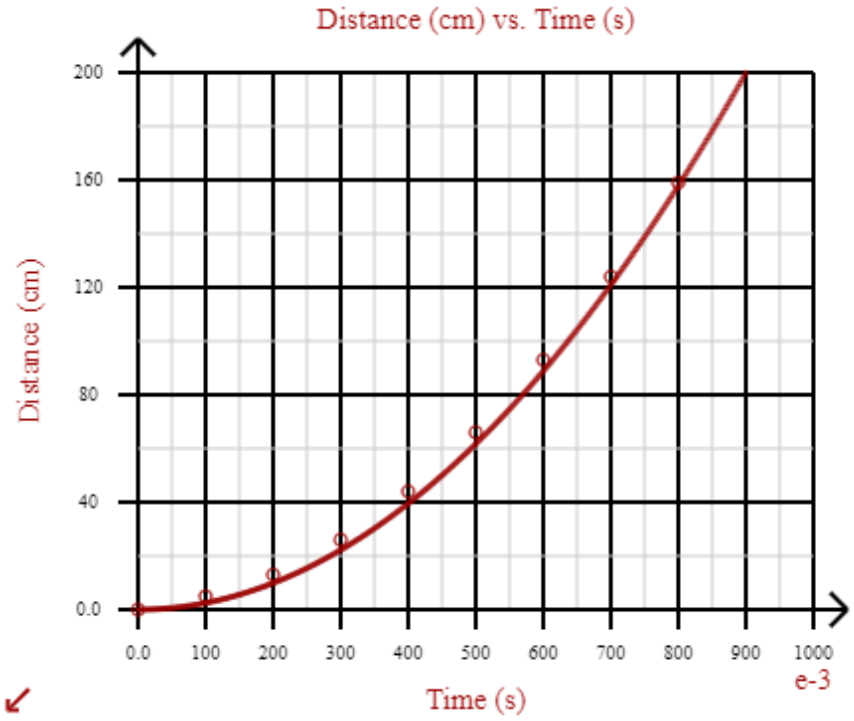

Figure 1: Non-linearized Data

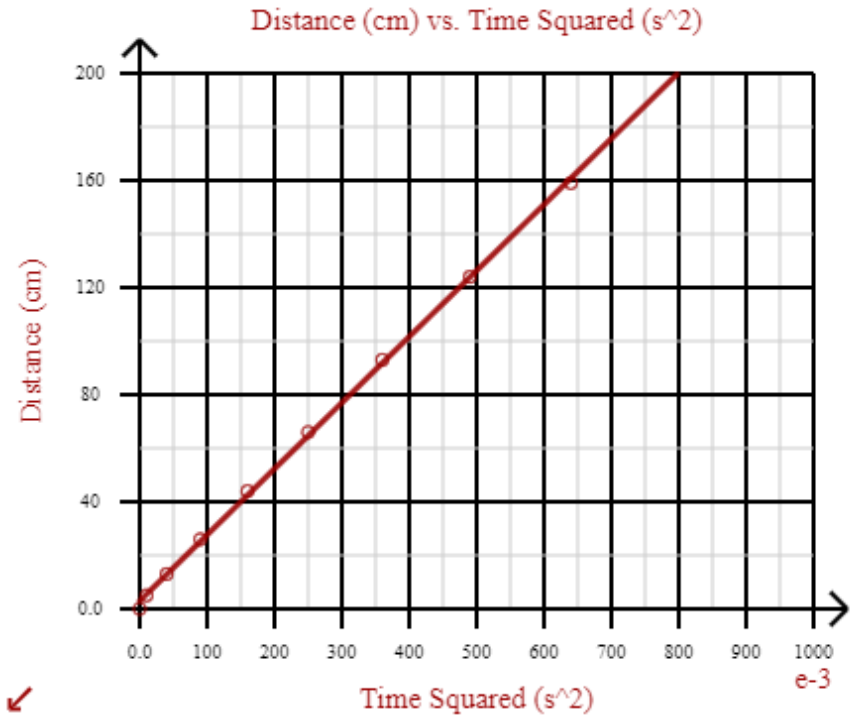

Figure 2: Linearized Data, $d = 246.7t^2 + 2.978$

3 Mathematical Analysis

The equation yielded by the linearized graph is: $d = 246.7t^2 + 2.978$ or $d = 246.7s + 2.978$, where variables substitution $(s = t^2)$ is used to keep the function linear.

Thus, the slope is $246.7\left[\frac{\text{cm}}{\text{s}^2}\right]$, as this value represents the acceleration of the ice puck.