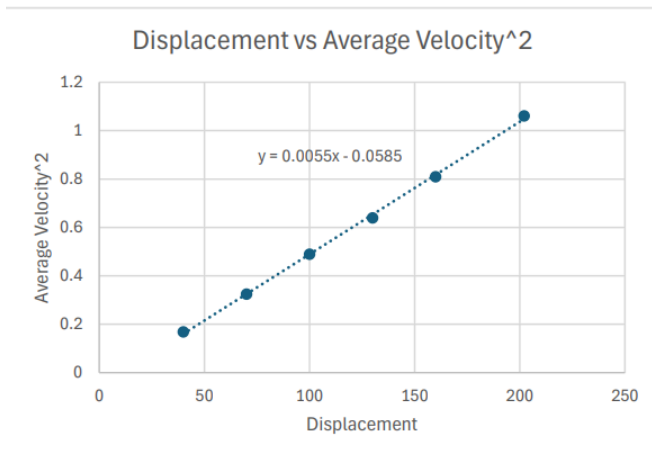
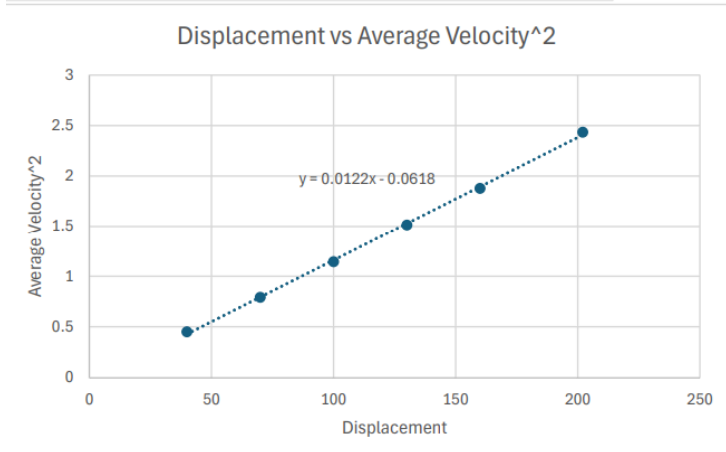


Displacement M	Average Velocity ²	Average Velocity m/s
202	2.4336	1.56
160	1.8769	1.37
130	1.5129	1.23
100	1.1449	1.07
70	0.7921	0.89
40	0.4489	0.67



Displacement M	Average Velocity ²	Average Velocity m/s
202	1.0609	1.03
160	0.81	0.9
130	0.64	0.8
100	0.49	0.7
70	0.3249	0.57
40	0.1681	0.41

Since we know that $\text{acceleration} = \frac{\Delta \text{velocity}^2}{\Delta X}$ and then we find the average of acceleration for both heights. For 7.6cm height it had an average acceleration of $.00483 \text{ m/s}^2$ and a average of acceleration of $.011567 \text{ m/s}^2$. The acceleration is larger with more displacement. We also know that the predicted acceleration is $g(\sin(\theta))$ so if we do that formula on the two tests we get an acceleration of $.1814 \text{ m/s}^2$ as our first predicted and 4.8048 m/s^2 as our second predicted. Meaning that our first answer had a percent error of 36.56% and our second one had a percent error of 99.7%. This could be due to many factors I may have made a mistake in my calculations but I can't find one. It could be we put our thing facing the wrong direction so we didn't measure the correct distance. It also could of been to faulty measurements as I don't think we were super accurate.