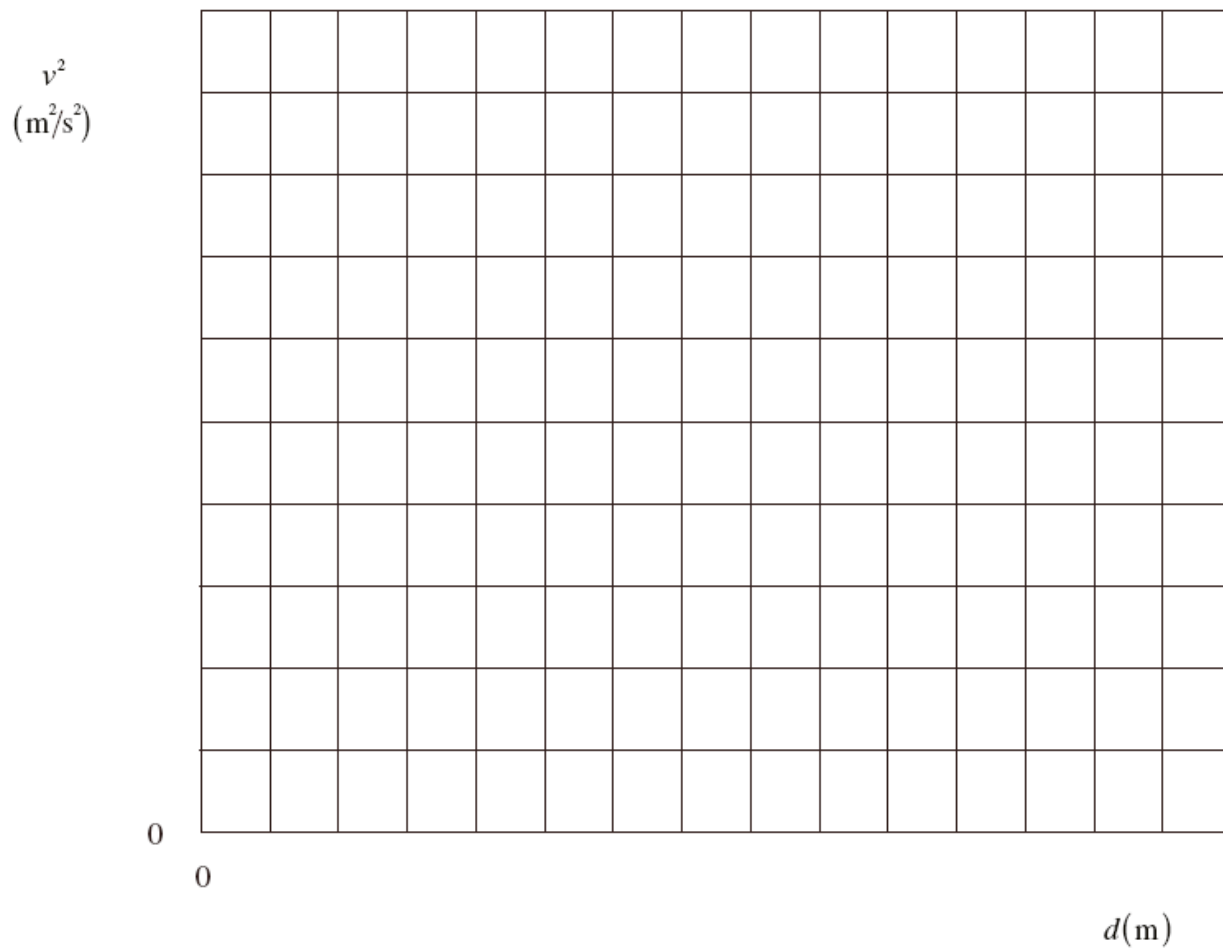


Physics 12 Review #10

A student measures the final speed of an accelerating car at various displacements. The data collected is shown below.

FINAL SPEED (m/s)	v^2	DISPLACEMENT (m)
5.9		2.0
6.5		4.0
7.2		6.0
7.9		8.0
8.4		10.0
9.0		12.0

Plot a graph of the final speed squared, v^2 , versus the displacement, d , of the car on the graph below.



Determine the slope of the line of best fit to the data and state what the slope represents. Extend the line to the y -axis and use the y -intercept to determine the initial speed of the car.