

RL2: Kinematics

In this review lab you will use the ticker tape machine to measure the timing element of two kinematic system. One will be a free fall system, one will be going down the ramp.

Using the ticker machine let a car free fall off the counters attached to the ticker machine. Using kinematics determine the length of time for the free fall. Repeat with table heights to confirm.

Distance	Acceleration	Time	Dots	Time/Dot

Once you have calibrated your machine you will use it to measure the velocity and acceleration down a ramp.

X_1	T_1	V_{1avg}	$V_{halfway}$	X_2	T_2	V_{2Avg}	V_{bottom}

Acceleration _{halfway}	Accelartion _{bottom}

1. Did the acceleration change from the halfway mark to the bottom? Should it?
2. Did mass play a role in the velocity and accelerations of the cars?
3. Was V_{half} and V_{bottom} instantaneous or an average?