**Problem #1:**

A meteorite is briefly tracked by radar during its entry into the earth’s atmosphere. Its altitude vs. time after its initial detection is given in the table to the right. Assume that the meteorite has a roughly constant acceleration due to gravity and aerodynamic drag. Make a scatter plot of the radar tracking data and fit an appropriate trendline to it.

**Solution:**

**Question(s):**

1. What is the meteorite’s velocity at the time of its initial detection?
2. What is the meteorite’s deceleration during the time it was tracked on radar?
3. Predict the approximate time after detection when it will strike the ground.

**Answer(s)**

1. The meteorite’s velocity at the time of its initial detection is -5 m/s
2. The meteorite’s deceleration during the time it was tracked was -10m/s^2.
3. The approximate time the meteor will hit the ground after being detected was 3 seconds.

**Problem #2:**

Compute and plot the deflection of the beam, v, vs. distance from the left end, x. Use increments of 1/2 inch for x.





**Solution:**

**Question(s):**

1. What is the maximum deflection of the beam (and in which direction)?

**Answer:**

1. The maximum deflection of the beam is 13.08 inches.