

NAME: _____

Tracker Software and Matchbox Car Jumps

After analyzing the video footage shown in class, use the data collected from the Tracker Program and complete the following tasks and questions:

1. Use the data to create a quadratic regression equation comparing horizontal distance (x) and vertical distance (y)

2. How far from the base of the table did the Matchbox car land/travel?

t (s)	x (cm)	y (cm)
0.000	-1.759	98.49
0.034	10.49	91.73
0.067	16.88	88.29
0.101	23.21	84.42
0.135	29.55	76.33
0.168	35.88	67.88
0.202	41.50	59.44
0.235	47.48	51.00
0.269	54.70	40.39
0.303	60.15	28.49
0.336	65.42	18.64

3. Use the data to create a quadratic regression equation comparing time (t) and vertical distance (y)

4. To the nearest thousandth of a second, how long did it take the Matchbox car to hit the ground?

5. In your opinion, how can video analysis be helpful in the real world?

6. If time, explore the Tracker Video Analysis and Modeling Software (download the software if necessary)