Example 4: Automobile Land Speed Records (GR 5-10)   
In the first recorded automobile race in 1898, Count Gaston de Chasseloup-Laubat of Paris, France, drove 1 kilometer in 57 seconds for an average speed of 39.2 miles per hour (mph) or 63.1 kilometers per hour (kph). In 1904, Henry Ford drove his Ford Arrow across frozen Lake St. Clair, MI, at an average speed of 91.4 mph. Now, the North American Eagle is trying to break a land speed record of 800 mph. The Federation International de L’Automobile (FIA), the world’s governing body for motor sport and land speed records, recorded the following land speed records. (Retrieved on February 5, 2006, from

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 407.447 | Craig Breedlove | Spirit of America | GE J47 | 8/5/63 |
| 413.199 | Tom Green | Wingfoot Express | WE J46 | 10/2/64 |
| 434.22 | Art Arfons | Green Monster | GE J79 | 10/5/64 |
| 468.719 | Craig Breedlove | Spirit of America | GE J79 | 10/13/64 |
| 526.277 | Craig Breedlove | Spirit of America | GE J79 | 10/15/65 |
| 536.712 | Art Arfons | Green Monster | GE J79 | 10/27/65 |
| 555.127 | Craig Breedlove | Spirit of America, Sonic 1 | GE J79 | 11/2/65 |
| 576.553 | Art Arfons | Green Monster | GE J79 | 11/7/65 |
| 600.601 | Craig Breedlove | Spirit of America, Sonic 1 | GE J79 | 11/15/65 |
| 622.407 | Gary Gabelich | Blue Flame | Rocket | 10/23/70 |
| 633.468 | Richard Noble | Thrust 2 | RR RG 146 | 10/4/83 |
| 763.035 | Andy Green | Thrust SSC | RR Spey | 10/15/97 |
|  | | | |  |

Example 5: Distance and Time (GR 8-10)   
The following data were collected using a car with a water clock set to release a drop in a unit of time and a meter stick. The car rolled down an inclined plane. Three trials were run. Create a data table with an average distance column and an average velocity column, create an average distance-time graph, and draw the best-fit line or curve. Estimate the car’s distance traveled and velocity at six drops of water. Describe the motion of the car. Is it going at a constant speed, accelerating, or decelerating? How do you know?