**Home Run Ball**

Fenway Park, the home ballpark of the Boston Red Sox, is one of the most famous and most recognized professional sports venues in the United States. Built in 1912, Fenway Park is revered for its history and for the generations of ball players that have played on its field. The ballpark is also known for its unique outfield wall, labeled the Green Monster, which stands 37-feet high and is an imposing structure for batters. The image below shows the dimensions of the park. The numbers in white represent the distance between home plate and the outfield wall.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | |  |  | | --- | --- | | Wall | Height | | Left Field Wall | 37 feet | | Center Field Wall | 17 feet | | Bullpen Wall | 5 feet | | Right Field Wall | 4 feet | |

The Green Monster, due to its immense height, has prevented many well-struck baseballs from becoming home runs. Your task is to model the flight of a home run ball at Fenway Park. The table above displays information about heights of the outfield falls at Fenway Park that you can use to construct your model.

**Assignment:**

* Formulate a model for the flight of a home run ball at Fenway Park
* State the model’s assumptions
* Describe the position of the baseball when it reaches its maximum height
* Determine the maximum distance that the baseball would travel if it were not impeded
* Create a graph showing the path of the baseball
* Explain why your model corresponds to a home run ball at Fenway Park