**Lab 1: Analysis of Drone Flight Data**

*Understanding the Problem*

The problem asks me to find the time values (x-values) where the drone exactly reaches its defined hover height (when y-value = 0). From the plotting of the function, I already know some of the x-values and their corresponding y-values that span the closed interval between 0 and 4 seconds.

*Devising a Plan*

From my current understanding of MATLAB, I could access all the rendered x- and y-values by entering the variable tables. Since when the drone reaches its defined hover height, the y-value is zero, then I could look for the corresponding x-value within the data set.

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A second plan to approach the problem is to use the “find” function to search for when the y-value equals to 0.

*Carrying Out the Plan*

When performing the first plan, the first root was found easily but the other two faced some difficulty as their y-values did not exactly equate to 0 but were close. Thus, I increased the number of intervals in the function () and took the y-value that’s the closest to 0 within a set interval and found its corresponding x-value.

The same difficulty is encountered when performing the second plan as did during the first. It was solved by allowing the search range to span over the values that were approximately close to 0.

*Looking Back*

My answer contains three roots which are supported by the physical graph and the figure located on the first page of the Lab instructions. The location of the roots is also approximately identical to the two models.