Model Predictive Control
Checkpoint 5
Date: 11 October 2020

1 Question 1

Some explanations on the codes:

- First, the three matrices are initiated with appropriate dimensions.
- Then a loop is performed `k = 0 : N - 2`, where the matrices are calculated according to the formulas. For the matrix `Sk`, a submatrix called `sub` was used, where it is initiated and 1 is put at the correct place before the kronecker operation is performed, and then `sub` is reset.
- To add the terminal penalty, the different last terms were calculated separately.

2 Question 2

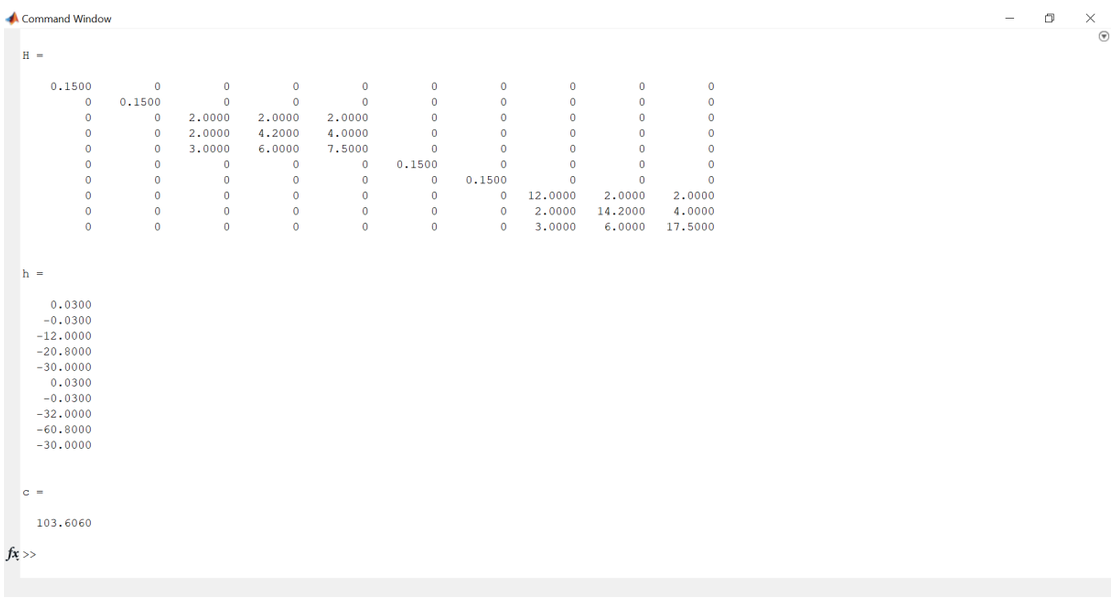

Figure 1: Validation of the cost matrix function.

We can see that the value of `H`, `h`, and `c` are exactly the same as the given data. That means the function has been validated.