

Submit your Jupyter notebook with the answers to gradescope by 10:50am.

We want to apply shooting to solve the boundary value problem

$$y'' = 6x^2, \quad y(0) = 5, \quad y'(1) = 1.$$

1. The first guess 1 for $y'(0)$ yields 2 for $y'(1)$.

The second guess -2 for $y'(0)$ yields 0 for $y'(1)$.

Compute your next guess for $y'(0)$.

2. What can you say about the correctness of your next guess?