

One:

- I would expect to see numbers similar to the y intercept and slope of the line that the model is trying to fit ($y = 0.3x + 1$). In this particular example, I would expect to see an intercept close to 1, and a coefficients close to 0.3.

Two:

- I expected it to print out the corresponding y values when plugged back into the original equation.

Three:

- I expected to see a line similar to the graph of $y = 0.3x + 1$.

Four

- I changed the equation of the line to $\text{data_one_x}'y' = 1 * \text{data_one_x}'x' + 1$ and verified that the code still functioned. The output was Intercept: 1. Coefficients: 1. meaning that it came to the correct answer, verifying that the code was working properly.

One

- I expected it to print numbers similar to the definition of the plane: $y_two_x = 0.5 * x1_two_x - 2.7 * x2_two_x - 2 + \text{noise_two_x}(0.5, -2.7, -2)$

Two

- I expected to see a plane similar to the one defined above.

Three

- I decided to change the definition of the graph to $y_two_x = 1 * x1_two_x + 1 * x2_two_x + 1 + \text{noise_two_x}$ and see if the code still functioned. `print_model_fit` printed Intercept: 1.061603912300199 Coefficients: 0.97499882 0.96615802, showing that the code was working properly.

Four

- The only major differences were in the visualization section. I would imagine that these visualizations are very helpful with graphs containing few dimensions, but become far less useful as the math stays the same and the dimensions increase.