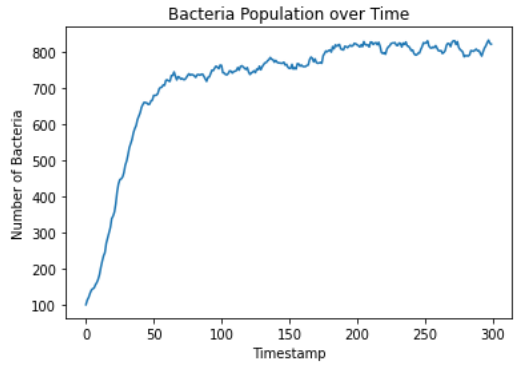

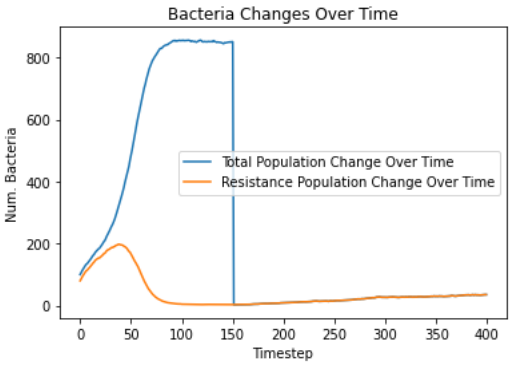

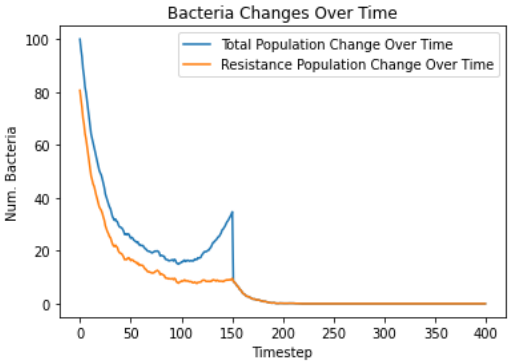

Before the antibiotic, the total population is always larger than the resistant population, because the nonresistant population dies at a quarter of the rate the resistant population does. After the antibiotic, the nonresistant population completely dies out, while the resistant population either slowly grows, or takes slightly longer to die out.

My results are not the same as the example graphs, but I haven't been able to figure out why.

Since 299 is past the point of any non-resistant bacteria surviving, the confidence intervals for both total and resistant population were the same for both birth probabilities, with the confidence interval of the 30% birth population being 8.5-8.9, and the 17% birth population being -0.21-0.49.