Lab Assignment 1

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Problem 1

For `logistic`, the population at time 0, 5, and 10 matched my expectation of it increasing over time given the parameters, as the initial population is below the carrying capacity.

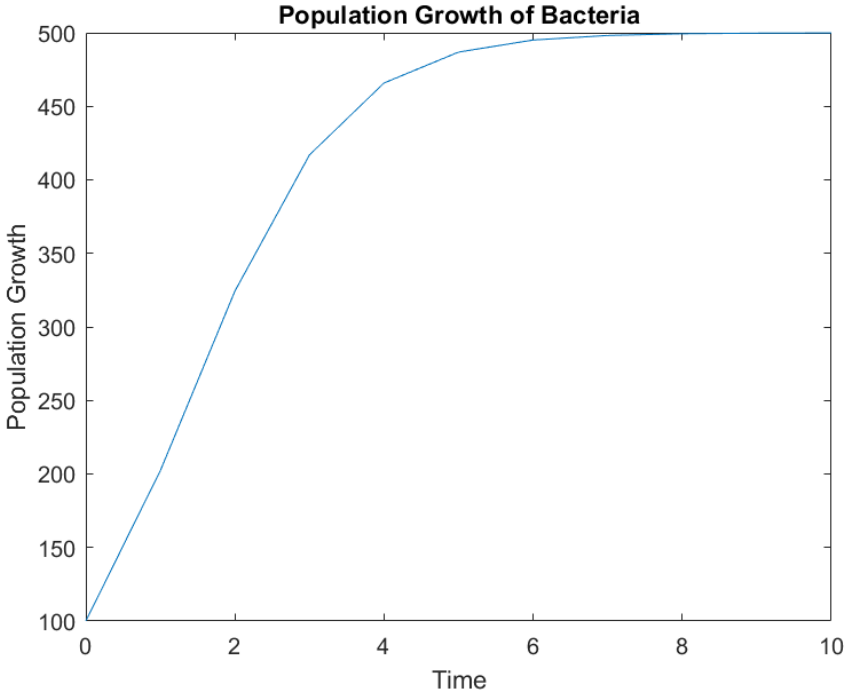

Figure 1: The graph for the function `logistic`

For `logistic2`, I initially expected it to act similarly to `logistic`, because I didn't actually read what the variable names represent. If I did, I would have noticed that the initial population was larger than the carrying capacity, and so the population would decrease until it was at the carrying capacity.

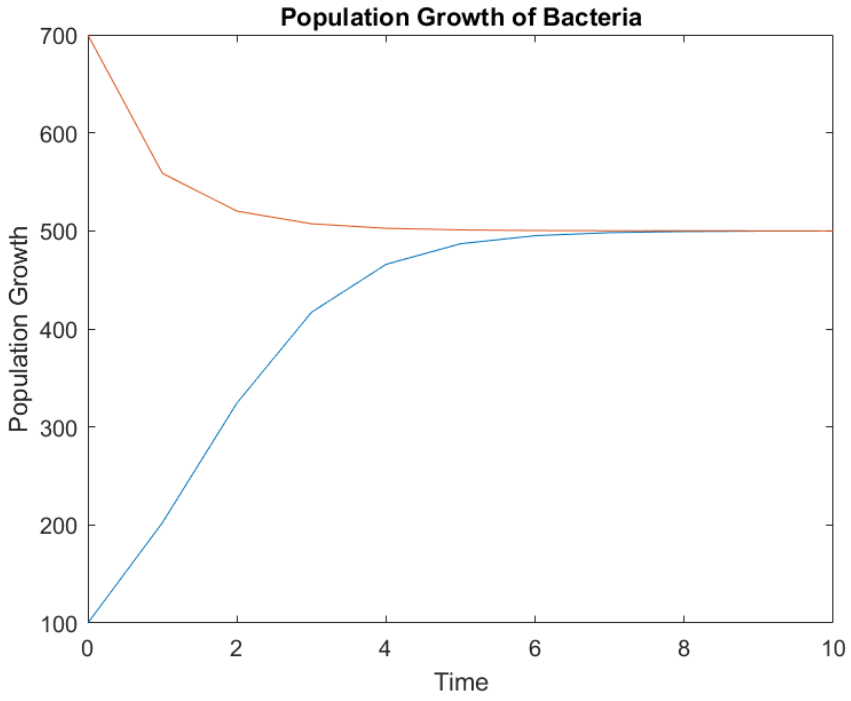

Figure 2: Graph comparing the plots of `logistic` and `logistic2`

If there is a large difference between the initial population and the carrying capacity (in either direction), then initially there will be a large amount of growth (increasing or decreasing). If the initial population is greater than the carrying capacity, it will decrease until it is at the carrying capacity. If the initial population is less than the carrying capacity, it will increase until it is at the carrying capacity. Either way, once the population reaches the carrying capacity, it will stabilize and remain constant at the carrying capacity.