Lab 14

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In this lab, the value for the probability of extinction (q_i) and also the probability of survival.
We go through all the values of lambda and for each value of lambda we perform the simulation.
The conditions for our simulation to stop, first is when there are no more children in a generation or in other words if extinction happens and the second condition is actually created by us to avoid the simulation going for a long time.
In each generation, each child is a random variable that creates random variables using the Poisson distribution
The value for lambda is actually equal to “m” which is the expected value for the number of children in each generation.
As we can see in the plots, the condition of $q_i <= q_{i+1}$ is met so the algorithm works fine. Here we can see the plots for the extinction and survival probability to prove that.