MTH 337, Sample Quiz 9

You will have **15 minutes** to take the actual quiz.

1. Write a function that calculates the probability of a cell getting infected based on the input number of infected neighbors. Plot this function over a range of infected neighbors from 0 up through 8.

2. What does the function `np.roll` do?

3. Consider an array whose entries are either 0, 1, or 2. How can you make everything zero except for the 1s?

4. Take the array of 0s and 1s you get from the previous problem, and use `np.roll` to compute the array where the each entry is the number of neighbors that are 1s.