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I think that my degree of success with the project is about 100%. It is expected that the program would be deadlocked sometimes.

At each queue size, I have the system of 1 producer and 5 consumers running 100 times. As my observation, when the number of consumers is 5, the deadlock probability is NOT linear with respect to length of the queue. The 50% deadlock seem to be at queue size of 42.

At fix queue size of 42, I was trying to figure out the deadlock probabilities with respect to different numbers of consumers (from 1 to 10). I notice that the probability of deadlock (based on 100 running times for each different number of consumers) seems to increase linearly with respect to number of consumer increasing from 1 to 10 as showed in the graph below.

To build the program, open a terminal window, navigate to the project's directory, run "make" command.

To test the project, navigate to the directory containing "consdonuts" and "proddonuts", then run the flowing commands:

~bill/cs308/A3\_donut\_loop.sh 1

Check out files "prod\_out.txt", "c1", "c2", "c3", "c4", and "c5" for results.