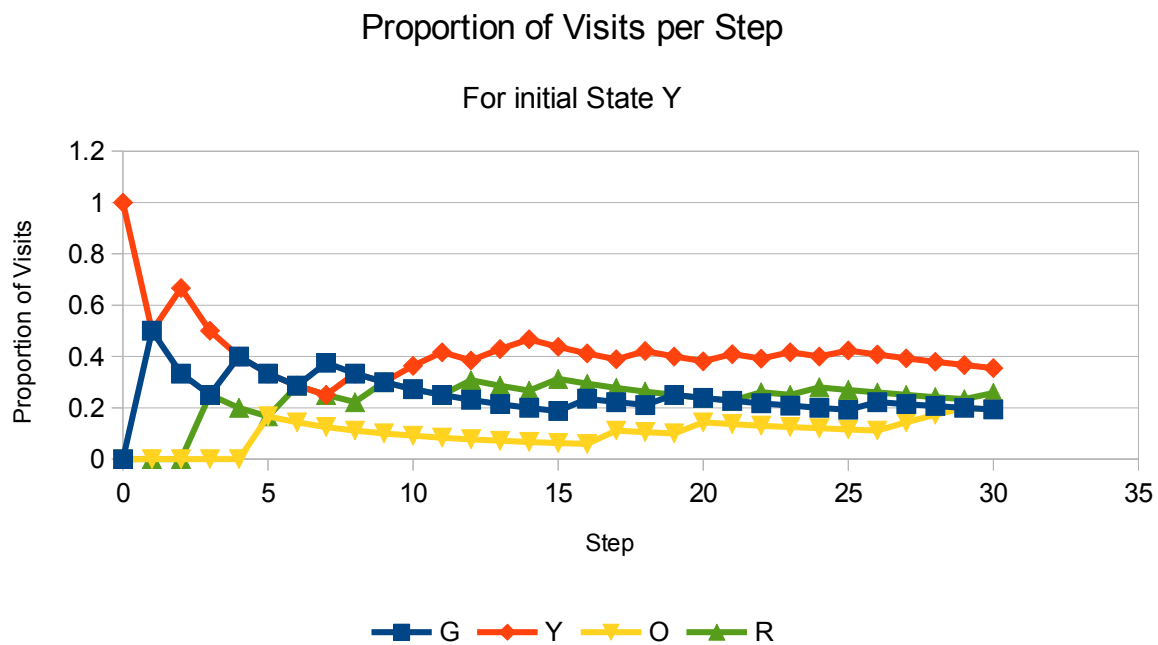
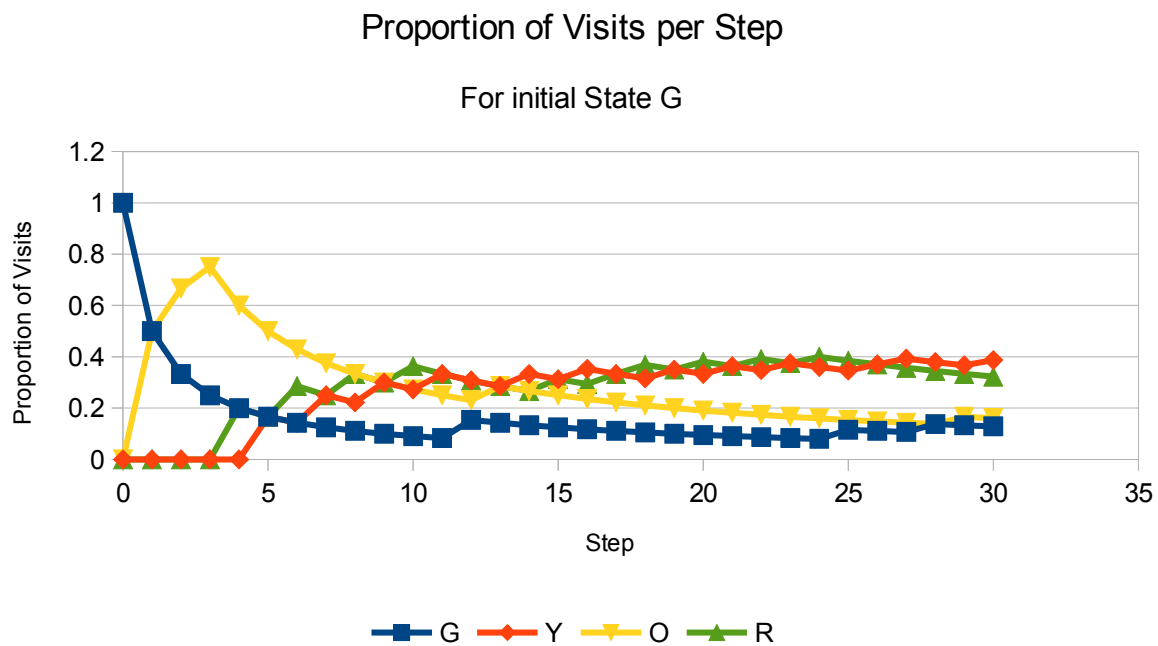


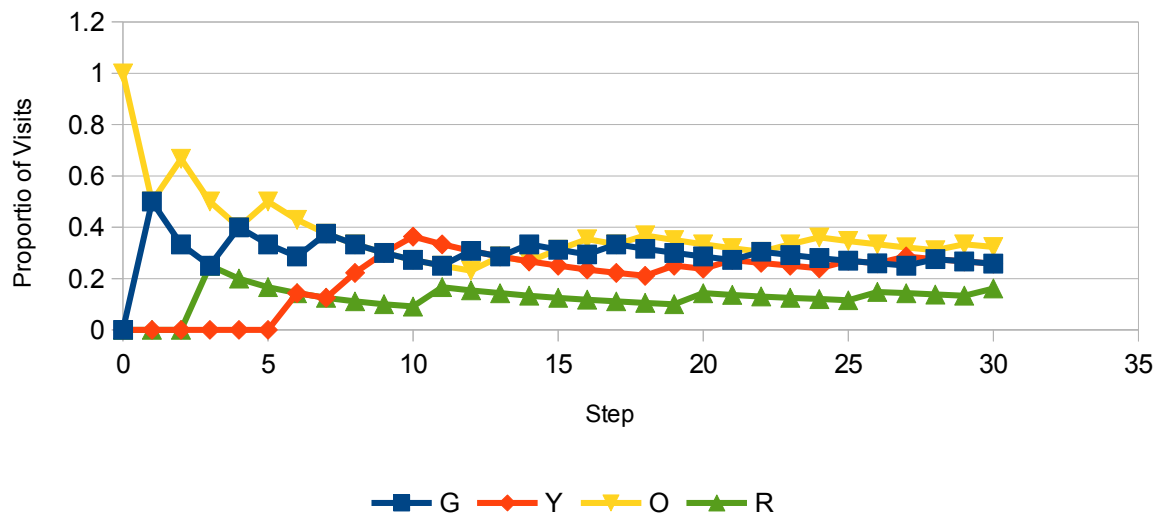
1.



Ryan Owens  
CS490-Simulation  
Program 1: Markov Chains

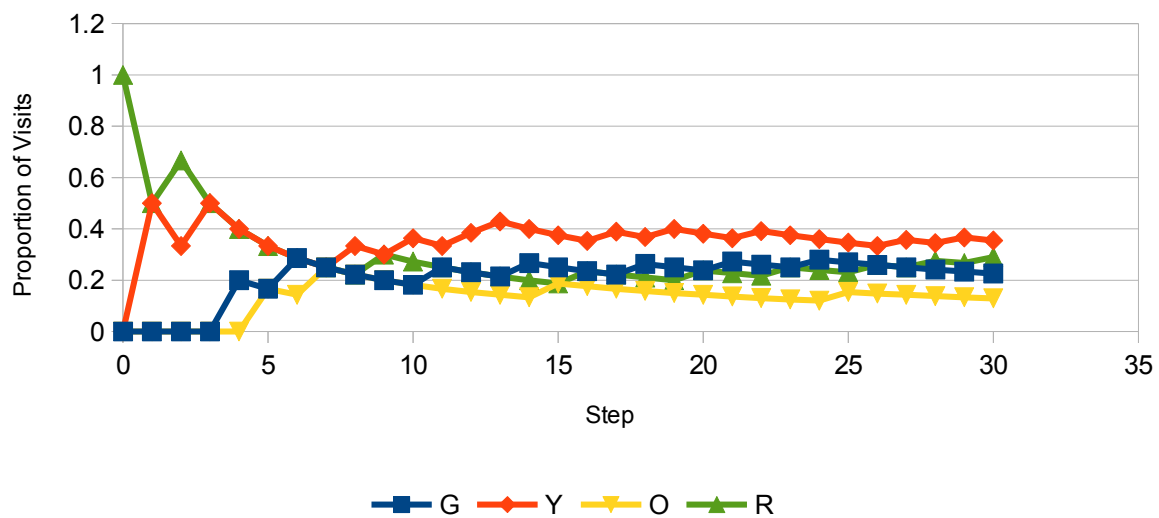
Proportion of Visits per Step

For initial State O

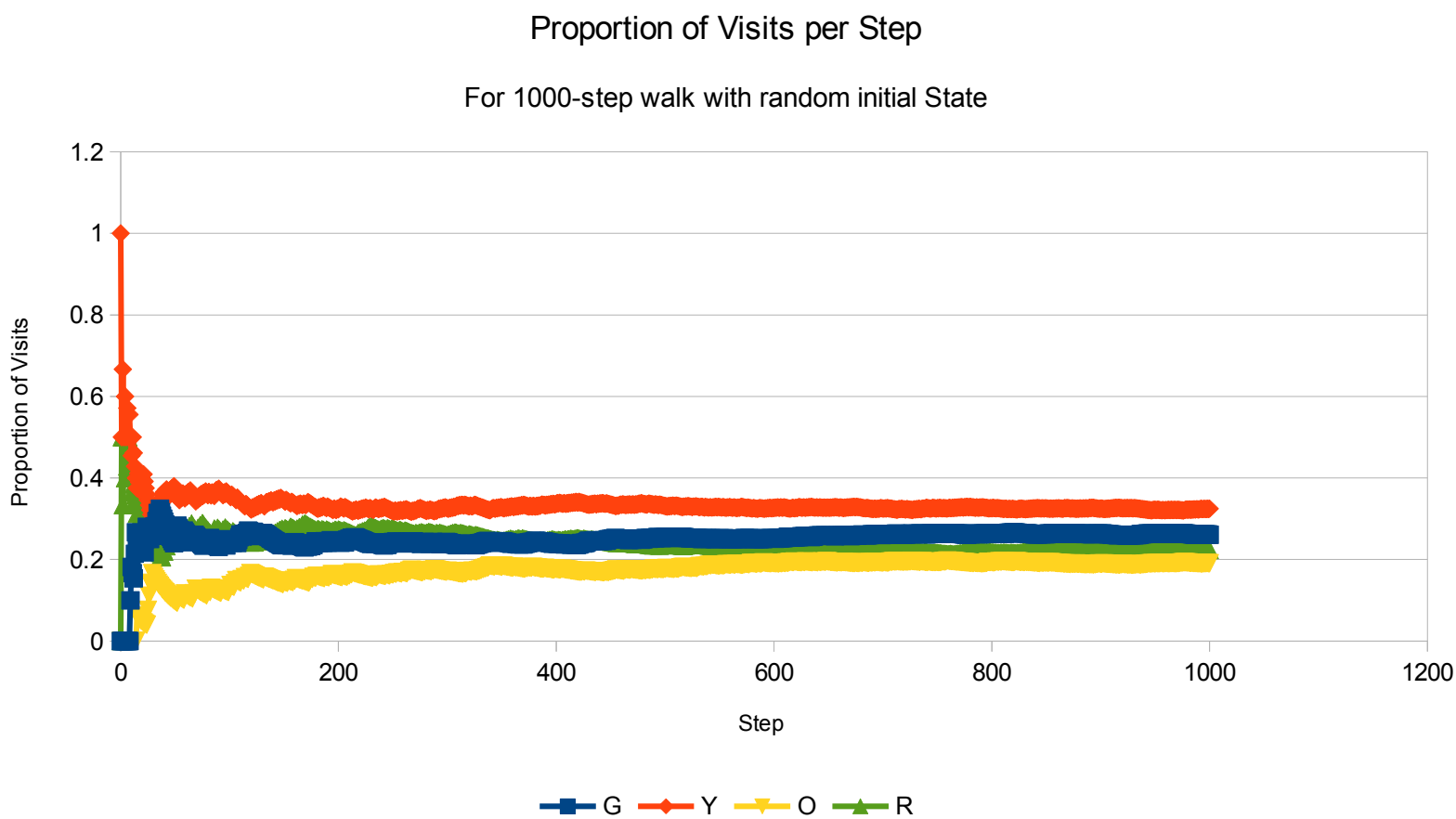
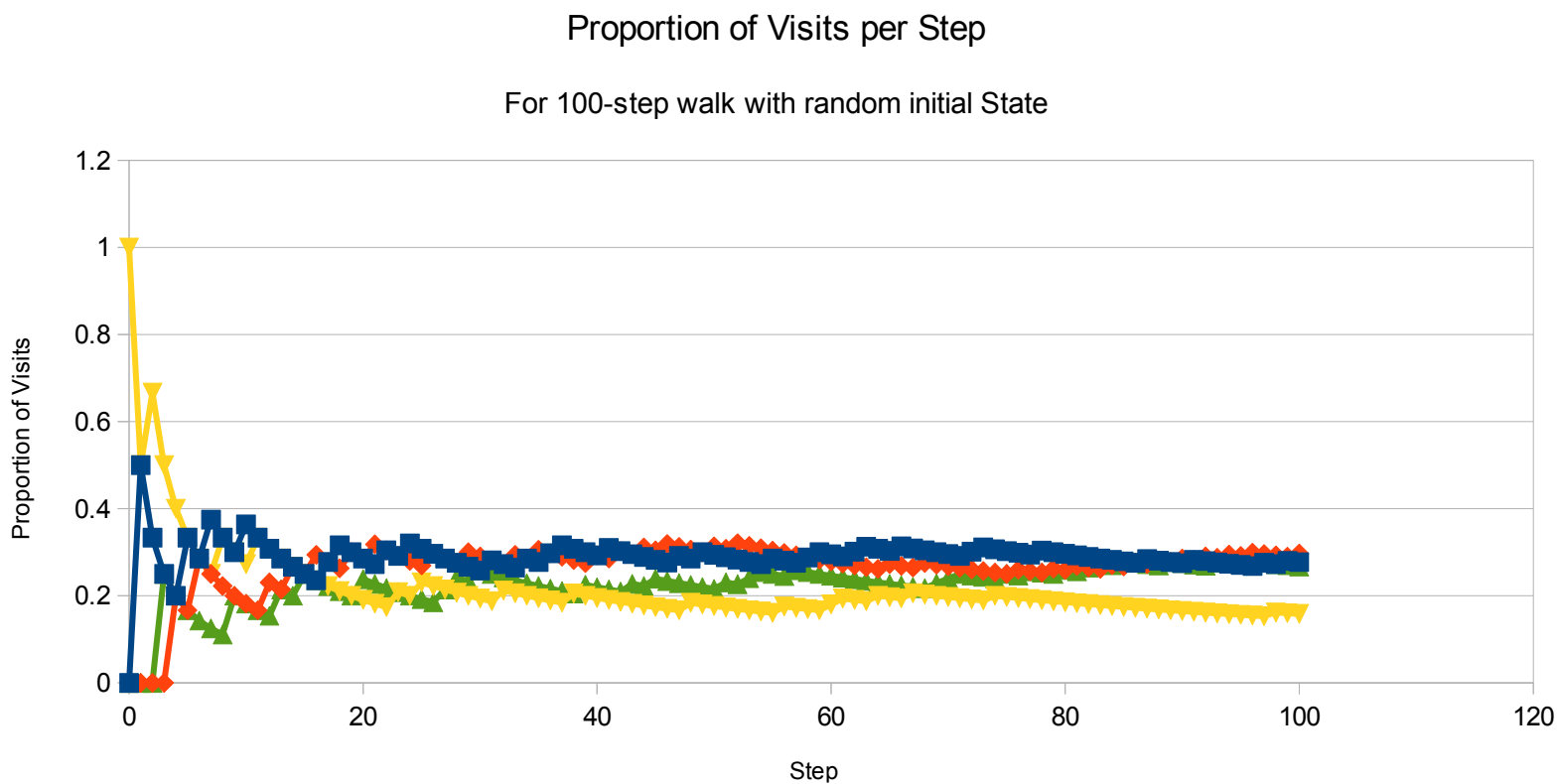


Proportion of Visits per Step

For initial State R

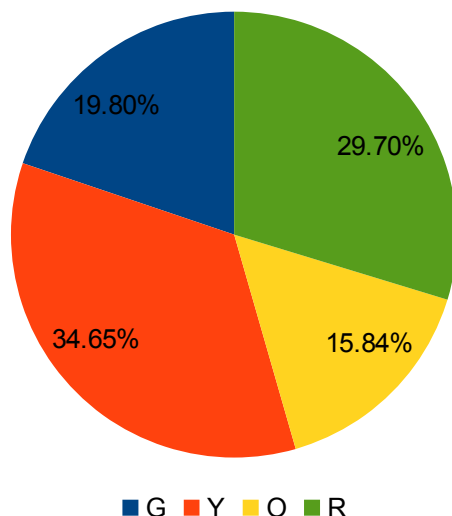


2.



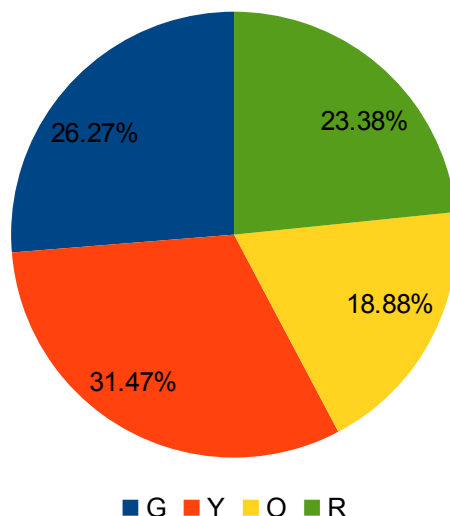
### Percentage of Visits per State

For 100-step walk with random initial State



### Percentage of Visits per State

For 1000-walk step with random initial state



Comparing the solutions from Homework 1 Problem 0 with my results for both the 100-step solution and the 1000-step solution show that my results average far higher than the homework solutions. From the homework solution, 56% of the year has air quality worse than 'Green'. My results, however, show that percentage is greater than 73%. It looks as though my percentage of time for Yellow is higher than that of the homework solutions as is my results for orange.

I suspect the issue may be due to computer rounding as well as not taking the Markov chains to larger step counts.

3.

