CS 485 Assignment 5, due March 3

1. Consider generating a random graph by flipping two coins, one with probability $p_{1}$ of heads and the other with probability $p_{2}$ of heads. Create an edge if either coin comes down heads. The graph generated will be in $G(n, p)$ for what value of $p$.
2. Create some mathematical structure and a property that has a phase transition. One possibility would be to generalize Su Doku to have a parameter n .
3. Find a closed form for the generating function for the infinite sequence of prefect squares $1,4,9,16,25, \ldots$
4. Given that $\frac{1}{1-x}$ is the generating function for the sequence $1,1,1, \cdots$, for what sequence is $\frac{1}{1-2 x}$ the generating function for.
