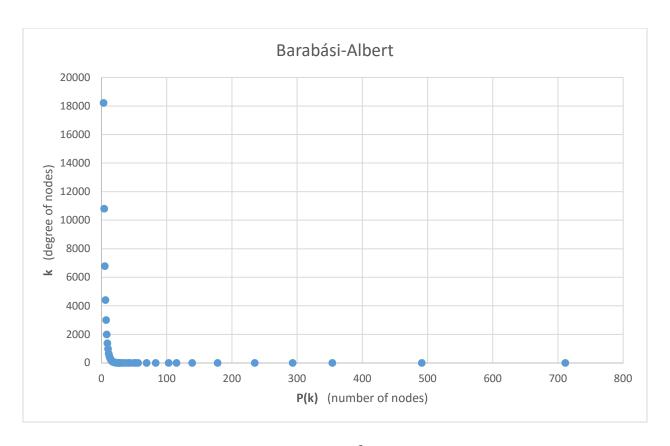Ryan Helmlinger

Period 3

6/21/16

Erdős-Rényi

Number of vertices: 50,000

Number of edges: 150,000

Highest vertex degree: 15

The code initially generates 3 points all connected to each other. Then after that, the code continuously adds a point and then connects it to k (3) random points from the current list of points. The code does this until it reaches the set number of vertices, which in this case was 50,000.

Barabási-Albert

Equation of exponential regression line: $y = 2703x^{-3}$

Number of vertices: 50,000

Number of edges: 150,000

Highest vertex degree: 711

      The code initially generates 4 random points and connects them randomly to one of the other 3 points. After this, the code continuously adds points and connect them it to k (3) different points. It does this by using a probability function and it gives the higher to chance of connecting to the more popular nodes. This is repeated until a certain number of vertices is reached, which in this case is 50,000.