Akash Patel (7pt, pmf and its CDF cannot be negative)

A)

Graph 1:

p= 0.5

Probabliity Mass Function



Cumulative Distribution Function



Graph 2:

p= 0.8

Probabliity Mass Function



Cumulative Distribution Function



Graph 3:

P = .3

Probabliity Mass Function



Cumulative Distribution Function



Graph 4

p = 2

Probabliity Mass Function



Cumulative Distribution Function



Graph 5:

P = -3

Probabliity Mass Function



Cumulative Distribution Function



From these examples, I can conclude that when p is increased the graph tends to shift to the right. Also the higher it goes it tends to start making a diamon shape graph. When p is decreased the the graph tends to shift to the left. The lower the number gets it also makes a diamond shape graph but tends to be stretched more vertically. The same properties were happening with the cumulative distribution function. The graphs shifted to the right when p was increased and shifted to left when p decreased.

B)

Graph 1

p=1

Probabliity Mass Function



Cumulative Distribution Function



Graph 2

P=.7

Probabliity Mass Function



Cumulative Distribution Function



Graph 3

P=.4

Probabliity Mass Function



Cumulative Distribution Function



Graph 4:

p=.1

Probabliity Mass Function



Cumulative Distribution Function



In this geometric distribution you can see that for the probability mass function, when p was 1 it was a straight line and once p was decreased it started to form a litter arc starting from the top right. The lower the p got the more angle the arch started to get. For the cumulative distribution, the graph stayed the same all through the higher range of p until it reached p=.1. That is when it start to bend down in its arch cause a slightly inward angle