Matlab Assignment 2 4.2 Carl Kleinhans (20p)

1. probability mass function of binomial distribution

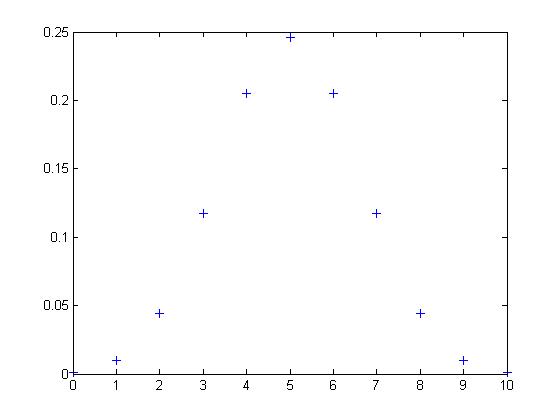
x = 0:10;

n = 10;

p = .5;

y = binopdf(x,n,p);

plot(x,y,'+')



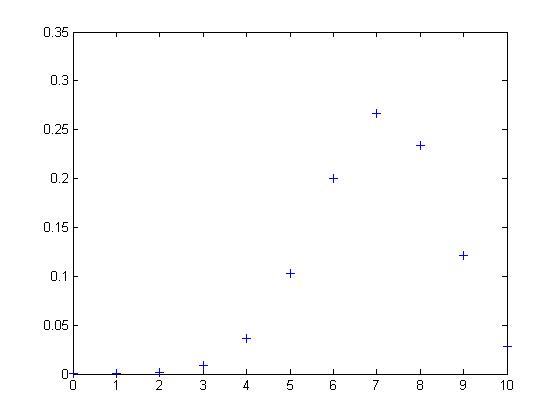
x = 0:10;

n = 10;

p = .7;

y = binopdf(x,n,p);

plot(x,y,'+')



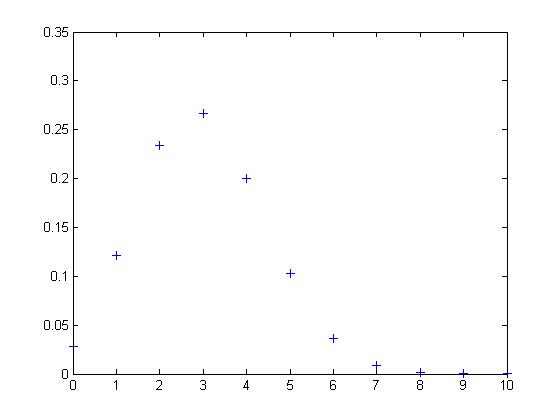
x = 0:10;

n = 10;

p = .3;

y = binopdf(x,n,p);

plot(x,y,'+')



1. cumulative distribution function of a binomial distribution

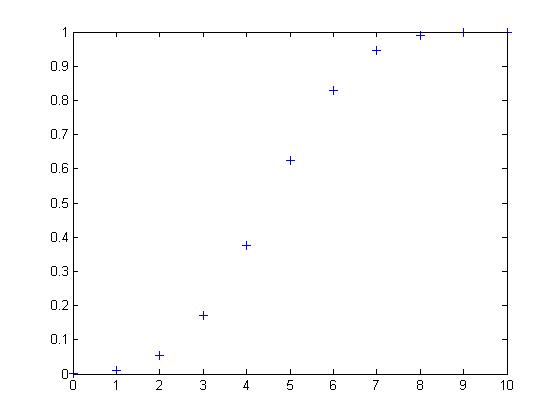
x = 0:10;

n = 10;

p = .5;

y = binocdf(x,n,p);

plot(x,y,'+')



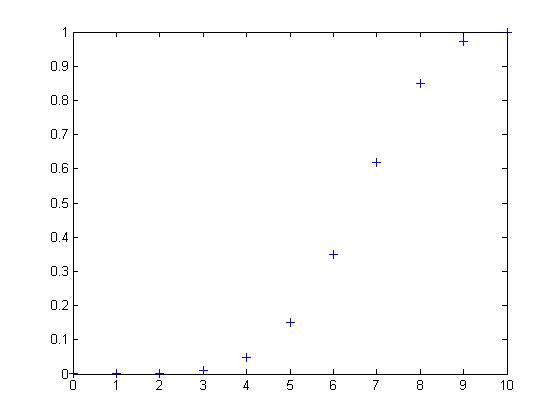
x = 0:10;

n = 10;

p = .7;

y = binocdf(x,n,p);

plot(x,y,'+')



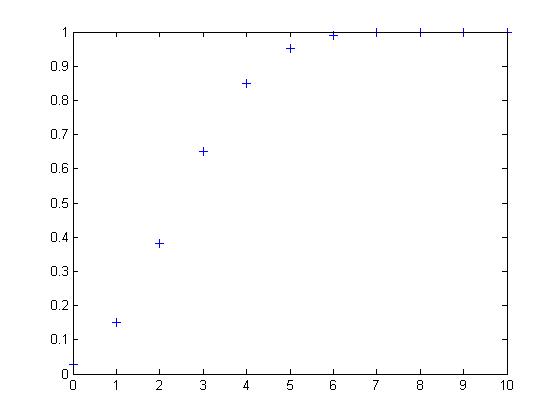
x = 0:10;

n = 10;

p = .3;

y = binocdf(x,n,p);

plot(x,y,'+')



Conclusion: Changing P around just changes the local maximum of the graph. I am not really clear on the implications of why this is exciting or not.

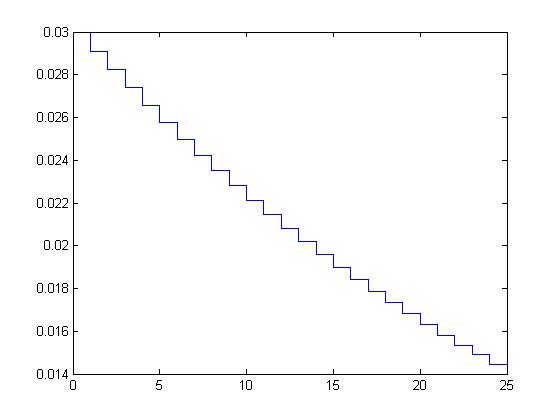
b) Probability mass function of geometric distribution

x = 0:25;

p = 0.03;

y = geopdf(x,p);

stairs(x,y)

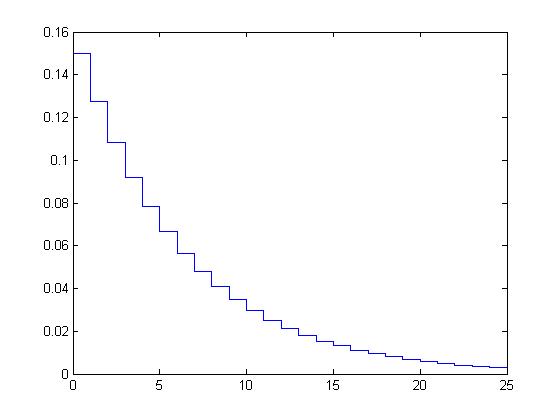


x = 0:25;

p = 0.15;

y = geopdf(x,p);

stairs(x,y)

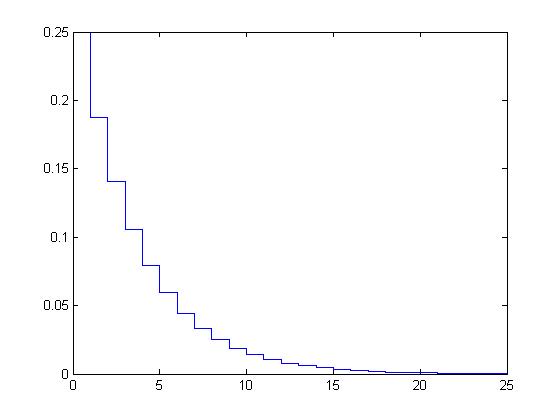


x = 0:25;

p = 0.25;

y = geopdf(x,p);

stairs(x,y)



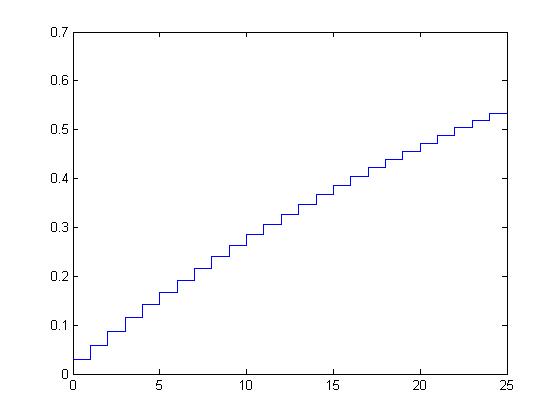
b) Cumulative distribution function of geometric distribution

x = 0:25;

p = 0.03;

y = geocdf(x,p);

stairs(x,y)



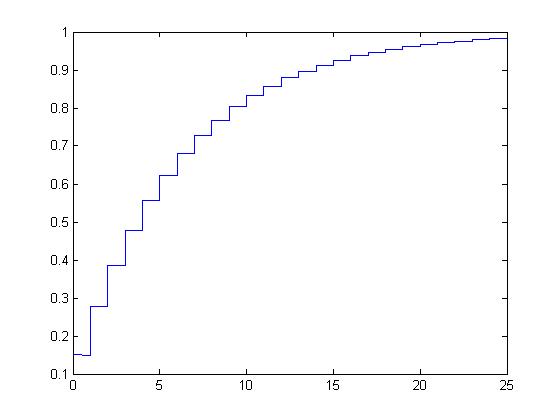
x = 0:25;

x = 0:25;

p = 0.15;

y = geocdf(x,p);

stairs(x,y)

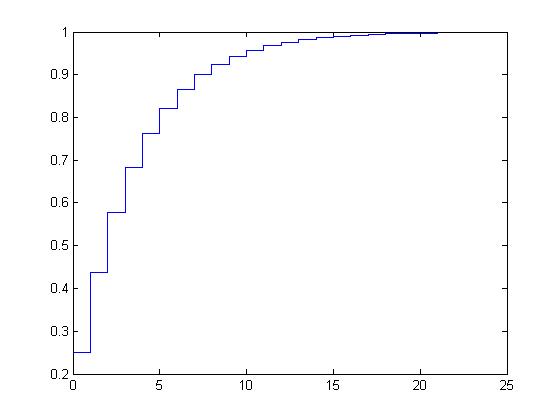


x = 0:25;

p = 0.25;

y = geocdf(x,p);

stairs(x,y)



Conclusion: Changing P around, changes the smoothing of the curve. I am not really clear on the implications of why this is exciting or not.