10.

b)

|  |
| --- |
| n = 100;  p = 0.25;  trial = 10000;  myarray = [];  for i = 1:trial  num\_people = random('Binomial',n,p);  each\_spent = 0;  for j = 1:num\_people  each\_spent = each\_spent + rand(1)\*50;  end  myarray(i) = each\_spent;  end  mean\_Y = mean(myarray)  std\_Y = std(myarray)    [y x] = hist(myarray,50);  area = ((x(2)-x(1))\*sum(y));  bar(x,y/area);  title('histogram of the pdf of Y'); |

c)



d) mean\_Y = 624.8798

std\_Y = 128.6461

They are matching with the values computed analytically.