

Poisson_plot.R

SIU850486795

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```
# Poisson_plot.R  
# Plot probabilities for the binomial distribution  
  
# Load necessary libraries  
library(ggplot2)  
  
# Poisson parameter here  
lambda <- 2  
  
# Poisson distribution function  
ymax <- 20  
y <- 0:ymax  
proby <- dpois(y,lambda)  
  
# Make data frame for ggplot2  
poisdata <- as.data.frame(cbind(y,proby))  
  
# Print data  
poisdata
```

```
##      y      proby  
## 1    0 1.353353e-01  
## 2    1 2.706706e-01  
## 3    2 2.706706e-01  
## 4    3 1.804470e-01  
## 5    4 9.022352e-02  
## 6    5 3.608941e-02  
## 7    6 1.202980e-02  
## 8    7 3.437087e-03  
## 9    8 8.592716e-04  
## 10   9 1.909493e-04  
## 11   10 3.818985e-05  
## 12   11 6.943609e-06  
## 13   12 1.157268e-06  
## 14   13 1.780413e-07  
## 15   14 2.543447e-08  
## 16   15 3.391262e-09  
## 17   16 4.239078e-10  
## 18   17 4.987150e-11  
## 19   18 5.541278e-12  
## 20   19 5.832924e-13  
## 21   20 5.832924e-14
```

```
# Generate plot showing frequencies
ggplot(poisdata,aes(y,proby))+
  geom_bar(stat="identity",width=0.05,fill="red")+
  geom_point(color="red",size=3)+
  ggtitle("Poisson distribution, lambda = 5")
```

