**INPUT:**

#Truncated Binomial Distribution

n <- 5 # Number of trails

p <- 1/3 # Probability of success

q <- 1-p # Probability of failure

#Simulate data from the truncated binomial distribution

num\_samples <- 1000 # Number of samples to generate

samples <- rbinom(num\_samples,n,p)

truncated\_samples <- samples[samples>0] #Truncated at zero

#Calculate Mean and Variance of the truncated distribution

mean\_truncated <- mean(truncated\_samples)

variance\_truncated <- var(truncated\_samples)

#Plot the histogran of the truncated samples

hist(truncated\_samples,main="Truncated Binomial Distribution",xlab="Values",ylab="Frequency")

#Print Mean and Variance of the truncated distribution

cat("Mean (Truncated) :",mean\_truncated,"\n")

cat("Variance (Truncated) :",variance\_truncated,"\n")

**OUTPUT:**

> cat("Mean (Truncated) :",mean\_truncated,"\n")

Mean (Truncated) : 1.964733

> cat("Variance (Truncated) :",variance\_truncated,"\n")

Variance (Truncated) : 0.8062719

