

exp__dist

Zankhana

August 29, 2017

```
ECHO=TRUE set.seed(1337) lambda = 0.2 exponentials = 40
```

```
simMeans = NULL for (i in 1 : 1000) simMeans = c(simMeans, mean(rexp(exponentials, lambda)))  
mean(simMeans)
```

```
lambda^-1 abs(mean(simMeans)-lambda)-1 var(simMeans) (lambda * sqrt(exponentials))^2 abs(var(simMeans)-  
(lambda * sqrt(exponentials))^2) library(ggplot2) ggplot(data.frame(y=simMeans), aes(x=y)) +  
geom_histogram(aes(y=..density..), binwidth=0.2, fill="#0062B2", color="black") + stat_function(fun=dnorm,  
arg=list(mean=lambda^-1, sd=(lambda*sqrt(exponentials))^1), size=2) + labs(title="Plot of the Simula-  
tions", x="Simulation Mean")
```