

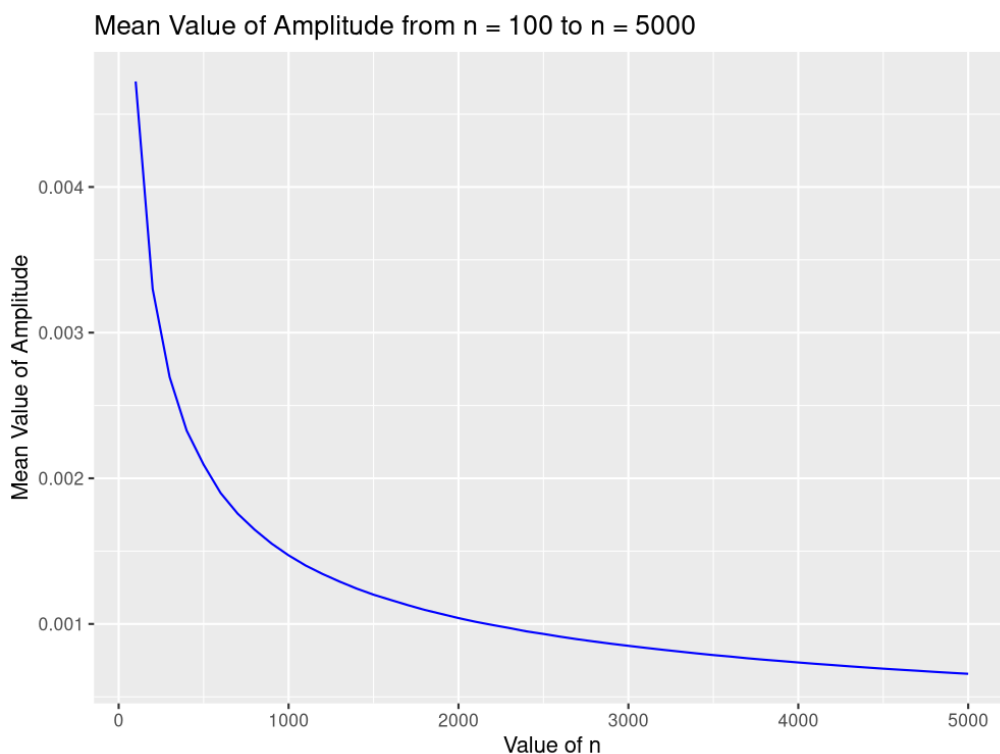
Semente = 361

m = 650

$\lambda = 0.01$

$(1 - \alpha) = 0.98$

```
1 library(ggplot2)
2 set.seed(361)
3
4 lambda <- 0.01
5 confidence <- 0.98
6 alfa = 1 - confidence
7 a <- qnorm(1 - alfa/2)
8 m <- 650
9
10 index <- numeric()
11 values <- numeric()
12
13 for (i in 1:50)
14 {
15   media <- 0
16   n <- i * 100
17   for (l in 1:m){
18     vector<- rexp(n,lambda)
19     mean_value = 1/mean(vector)
20     calc <- 2 * (a / sqrt(n)) * mean_value
21     media <- media + calc
22   }
23   media <- media/m
24   index <- append(index,n)
25   values <- append(values,media)
26 }
27
28 table <- cbind(index,values)
29 df <- data.frame(table)
30
31 ggplot(df, aes(x=index, y=values )) + geom_line(stat="identity", position=position_dodge(),color="blue")+
32   labs(title="Mean Value of Amplitude from n = 100 to n = 5000", x= "Value of n", y = "Mean Value of Amplitude")
```



Pela observação do gráfico obtido conclui-se que quanto maior o valor de n, menor será a média das amplitudes.