

Meu exemplo usando Sweave e Knitr

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```
> RNGkind("Marsaglia-Multicarry") # Gerador de numeros pseudo-aleatorios
> set.seed(c(362436069,521288629)) # Fixando semente
> n<-100
> p<-0.5
> REP<-5000
> #
> bernoulli<-function(n,p){
+   valores<-function(p){
+     x<-ifelse(runif(1)<=p,1,0)
+   }
+ replicate(n,valores(p))
+ }
> # Forma 1
> media1<-media2<-rep(0,REP)
> system.time({for(i in 1:REP){
+   media1[i]<-mean(bernoulli(n,p))
+ }
+ summary(media1)})
+ )

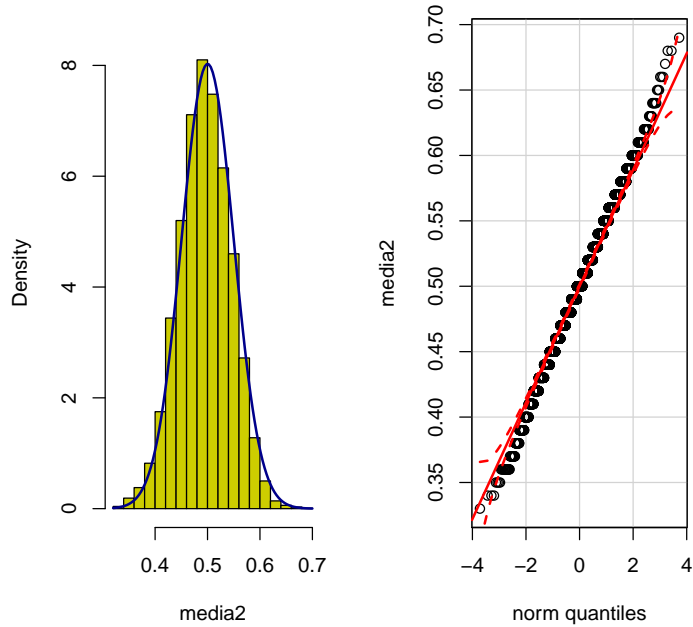
   user system elapsed
2.088   0.056   2.139

> #Forma 2
> system.time({media2<-apply(replicate(REP,bernoulli(n,p)),2,mean)
+ summary(media2)})
+ )

   user system elapsed
2.084   0.068   2.146

>
>
```

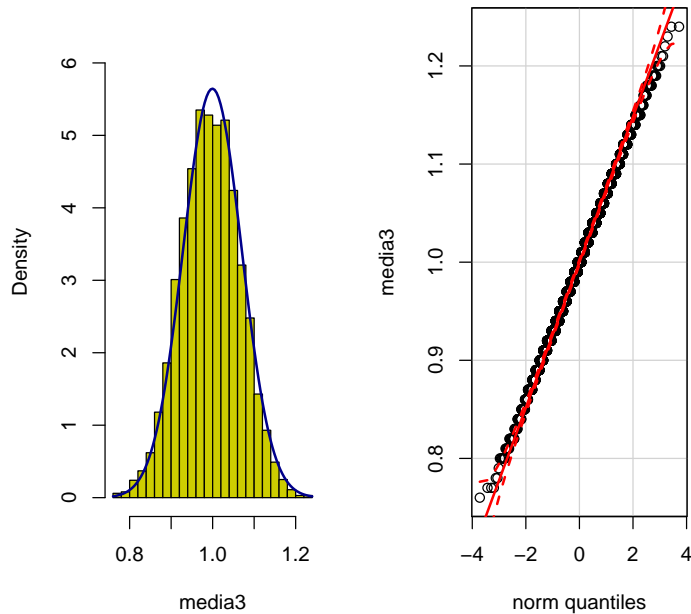
Distribuição empírica das médi



```
> #-----  
> # Geração de valores de uma dist. Binomial  
> #-----  
> N<-2  
> binomial<-function(n,N,p){  
+   valores<-function(N,p){  
+     x<-sum(runif(N)<p)  
+   }  
+ replicate(n,valores(N,p))  
+ }  
> media3<-rep(0,REP)  
> media3<-apply(replicate(REP,binomial(n,N,p)),2,mean)  
> summary(media3)
```

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
0.7600	0.9500	1.0000	0.9995	1.0500	1.2400

Distribuição empírica das médi



Here is a linear regression example:

```
> library(car)
> data(Prestige)
> attach(Prestige)
> qqPlot(income)
> set.seed(123)
> n<-100; x<-rnorm(n,sd=2)
> y<-1-0.5*x+rnorm(n)
> fit<-lm(y~x); summary(fit)
```

Call:

```
lm(formula = y ~ x)
```

Residuals:

Min	1Q	Median	3Q	Max
-2.75564	-0.62756	0.04594	0.69176	1.82140

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	0.95313	0.09641	9.886	<2e-16 ***
x	-0.48843	0.04554	-10.726	<2e-16 ***

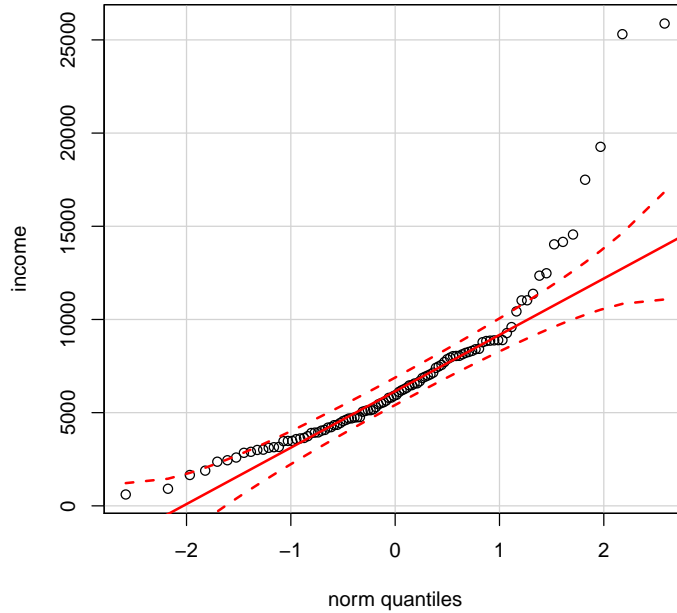
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.964 on 98 degrees of freedom

Multiple R-squared: 0.54, Adjusted R-squared: 0.5353

F-statistic: 115.1 on 1 and 98 DF, p-value: < 2.2e-16

>



```
> library(datasets)
> library(stats)
> data(airquality)
> fit <- lm(Ozone ~ Temp + Solar.R + Wind, data = airquality)

> library(xtable)
> print(xtable(fit, caption="Tabla de resultados"))
```

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	-64.3421	23.0547	-2.79	0.0062
Temp	1.6521	0.2535	6.52	0.0000
Solar.R	0.0598	0.0232	2.58	0.0112
Wind	-3.3336	0.6544	-5.09	0.0000

Table 1: Tabla de resultados

Sweave embeds the results!

```
> par(mfcol = c(2, 2))
> plot(fit)
```

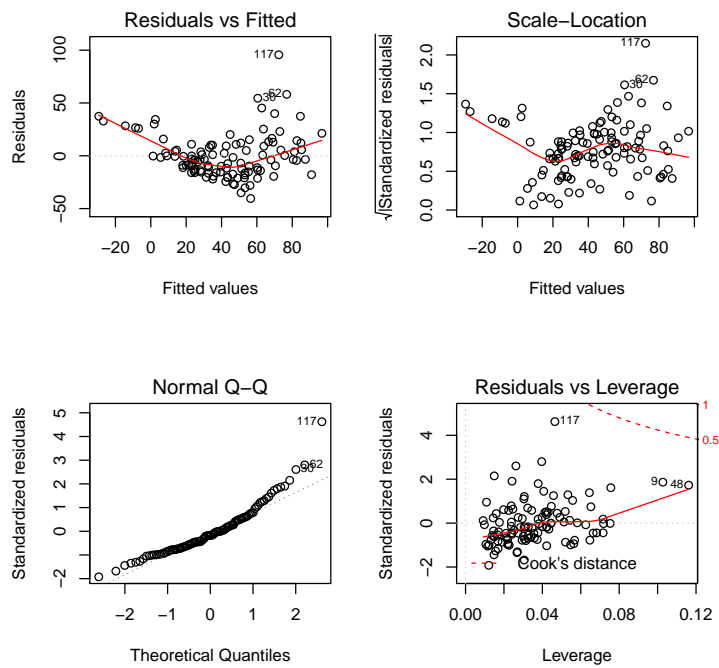


Figure 1: Linear model diagnostic plots