

LCE5783

Software R:

Pacote Rmarkdown



➤ Pacote Rmarkdown



Salvar e executar
códigos em R



Gerar
relatórios



➤ Instalação do pacote

Instalação
pacote



Files Plots Packages Help Viewer

Install Update

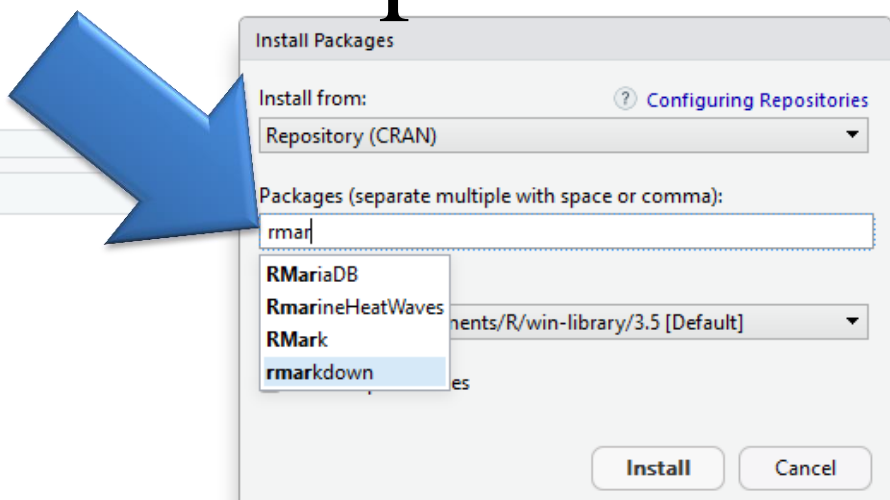
Install R packages

Package Name	Description	Version
boot	Bootstrap Functions (Originally by Angelo Canty for S)	1.3-20
class	Functions for Classification	7.3-14
cluster	"Finding Groups in Data": Cluster Analysis Extended Rousseeuw et al.	2.0.7-1
codetools	Code Analysis Tools for R	0.2-15
compiler	The R Compiler Package	3.5.1
datasets	The R Datasets Package	3.5.1
foreign	Read Data Stored by 'Minitab', 'S', 'SAS', 'SPSS', 'Stata', 'Systat', 'Weka', 'dBase', ...	0.8-70
graphics	The R Graphics Package	3.5.1
grDevices	The R Graphics Devices and Support for Colours and Fonts	3.5.1
grid	The Grid Graphics Package	3.5.1
KernSmooth	Functions for Kernel Smoothing Supporting Wand & Jones (1995)	2.23-15
lattice	Trellis Graphics for R	0.20-35
MASS	Support Functions and Datasets for Venables and Ripley's MASS	7.3-50
Matrix	Sparse and Dense Matrix Classes and Methods	1.2-14
methods	Formal Methods and Classes	3.5.1
mgcv	Mixed GAM Computation Vehicle with Automatic Smoothness Estimation	1.8-24
nlme	Linear and Nonlinear Mixed Effects Models	3.1-137
nnet	Feed-Forward Neural Networks and Multinomial Log-Linear Models	7.3-12
parallel	Support for Parallel computation in R	3.5.1

Environment History Connections

➤ Instalação do pacote

Digitar parte do nome do pacote



Name	Description	Version
<input type="checkbox"/> boot	Bootstrap Functions (Originally by Angelo Canty for S)	1.3-20
<input type="checkbox"/> class	Functions for Classification	7.3-14
<input type="checkbox"/> cluster	"Finding Groups in Data": Cluster Analysis Extended Rousseeuw et al.	2.0.7-1
<input type="checkbox"/> codetools	Code Analysis Tools for R	0.2-15
<input type="checkbox"/> compiler	The R Compiler Package	3.5.1
<input type="checkbox"/> datasets	The R Datasets Package	3.5.1
<input type="checkbox"/> foreign	Read Data Stored by 'Minitab', 'S', 'SAS', 'SPSS', 'Stata', 'Systat', 'Weka', 'dBase', ...	0.8-70
<input type="checkbox"/> graphics	The R Graphics Package	3.5.1
<input type="checkbox"/> grDevices	The R Graphics Devices and Support for Colours and Fonts	3.5.1
<input type="checkbox"/> grid	The Grid Graphics Package	3.5.1
<input type="checkbox"/> KernSmooth	Functions for Kernel Smoothing Supporting Wand & Jones (1995)	2.23-15
<input type="checkbox"/> lattice	Trellis Graphics for R	0.20-35
<input type="checkbox"/> MASS	Support Functions and Datasets for Venables and Ripley's MASS	7.3-50
<input type="checkbox"/> Matrix	Sparse and Dense Matrix Classes and Methods	1.2-14
<input type="checkbox"/> methods	Formal Methods and Classes	3.5.1
<input type="checkbox"/> mgcv	Mixed GAM Computation Vehicle with Automatic Smoothness Estimation	1.8-24
<input type="checkbox"/> nlme	Linear and Nonlinear Mixed Effects Models	3.1-137
<input type="checkbox"/> nnet	Feed-Forward Neural Networks and Multinomial Log-Linear Models	7.3-12
<input type="checkbox"/> parallel	Support for Parallel computation in R	3.5.1
<input type="checkbox"/> rpart	Recursive Partitioning and Regression	4.1-13

Environment History Connections

➤ Instalação do pacote

Install Packages

Install from: [? Configuring Repositories](#)

Repository (CRAN) ▼

Packages (separate multiple with space or comma):

rmarkdown|

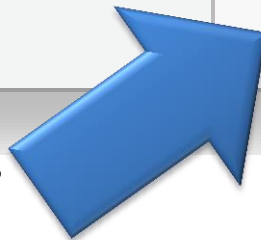
Install to Library:

C:/Users/Mie/Documents/R/win-library/3.5 [Default] ▼

Install dependencies

Install Cancel

Clicar



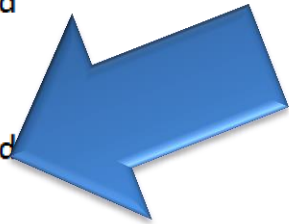
Instalação do pacote

```
RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function Addins
Console ~/
p
Content type 'application/zip' length 2868795 bytes (2.7 MB)
downloaded 2.7 MB

package 'highr' successfully unpacked and MD5 sums checked
package 'markdown' successfully unpacked and MD5 sums checked
package 'digest' successfully unpacked and MD5 sums checked
package 'Rcpp' successfully unpacked and MD5 sums checked
package 'backports' successfully unpacked and MD5 sums checked
package 'xfun' successfully unpacked and MD5 sums checked
package 'glue' successfully unpacked and MD5 sums checked
package 'magrittr' successfully unpacked and MD5 sums checked
package 'stringi' successfully unpacked and MD5 sums checked
package 'knitr' successfully unpacked and MD5 sums checked
package 'yaml' successfully unpacked and MD5 sums checked
package 'htmltools' successfully unpacked and MD5 sums checked
package 'evaluate' successfully unpacked and MD5 sums checked
package 'base64enc' successfully unpacked and MD5 sums checked
package 'jsonlite' successfully unpacked and MD5 sums checked
package 'rprojroot' successfully unpacked and MD5 sums checked
package 'mime' successfully unpacked and MD5 sums checked
package 'tinytex' successfully unpacked and MD5 sums checked
package 'stringr' successfully unpacked and MD5 sums checked
package 'rmarkdown' successfully unpacked and MD5 sums checked

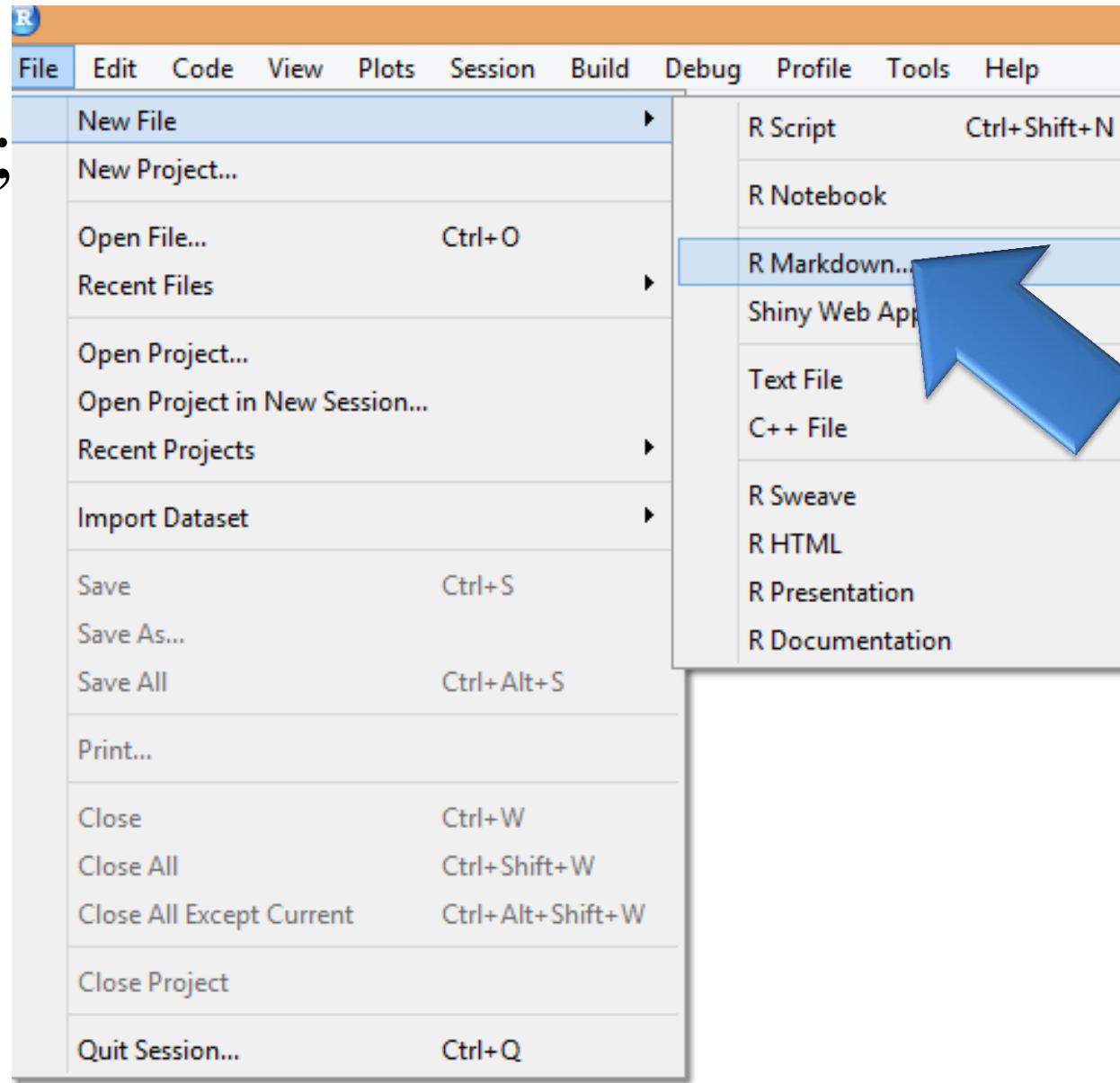
The downloaded binary packages are in
  C:\Users\Mie\AppData\Local\Temp\RtmpEjp2dw\downloaded_packages
> |
```

Instalação
completa



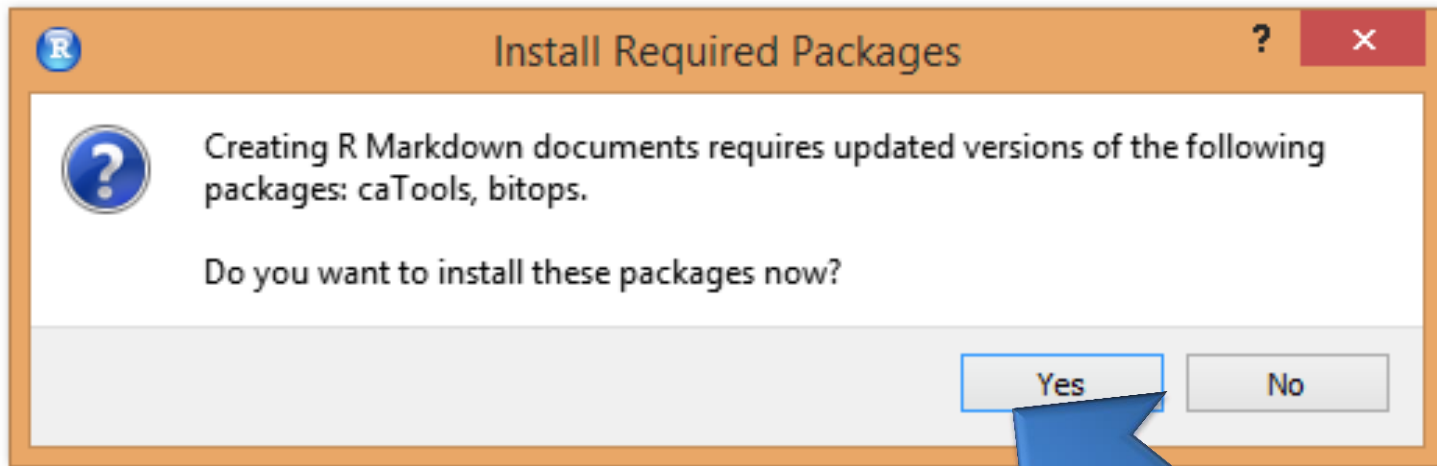
➤ Criar arquivo

- 1) Clicar em File;
- 2) New file;
- 3) Rmarkdown.



➤ Criar arquivo

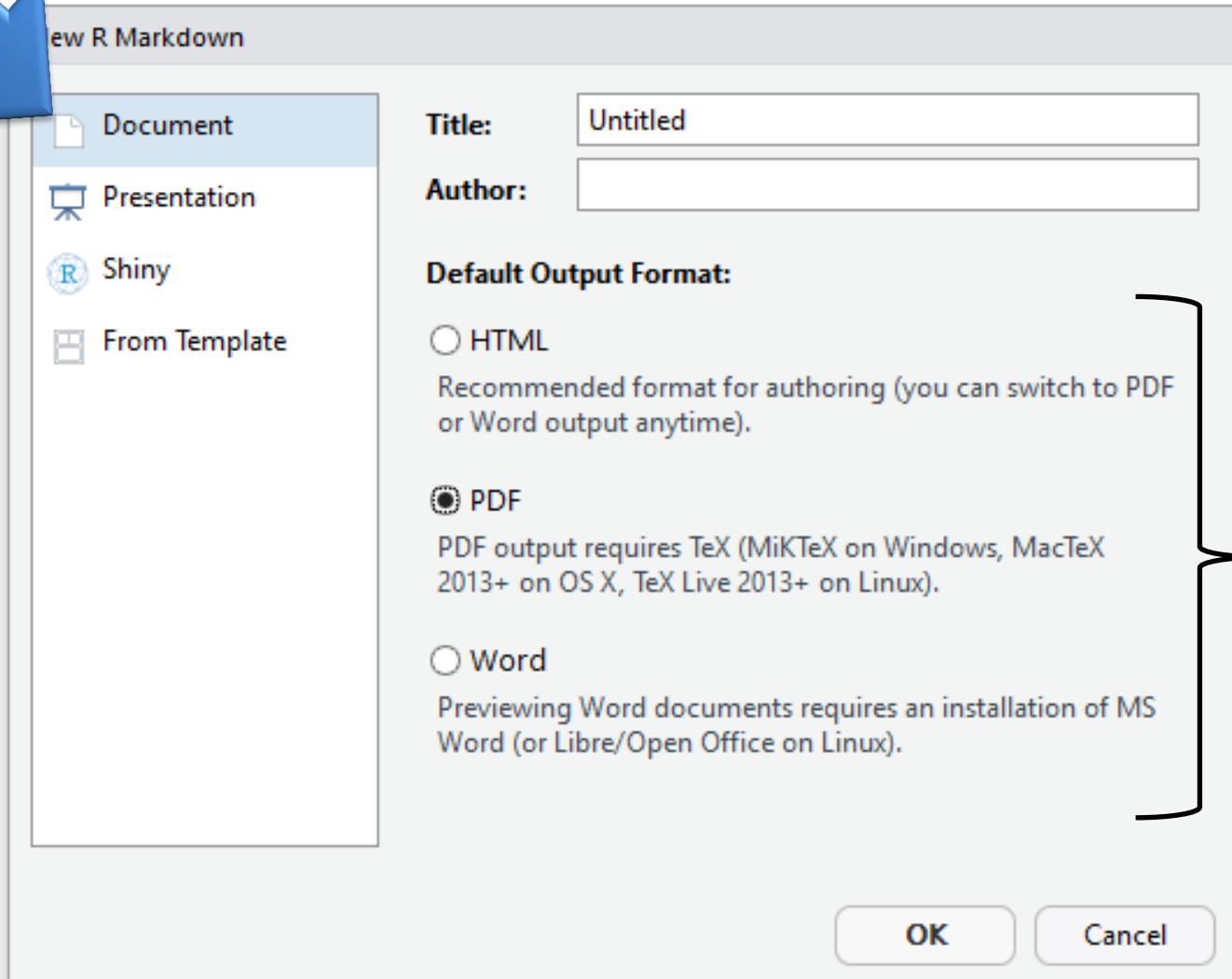
Mensagem de aviso: instalar os pacotes caTools e bitops



Clicar
em **sim**

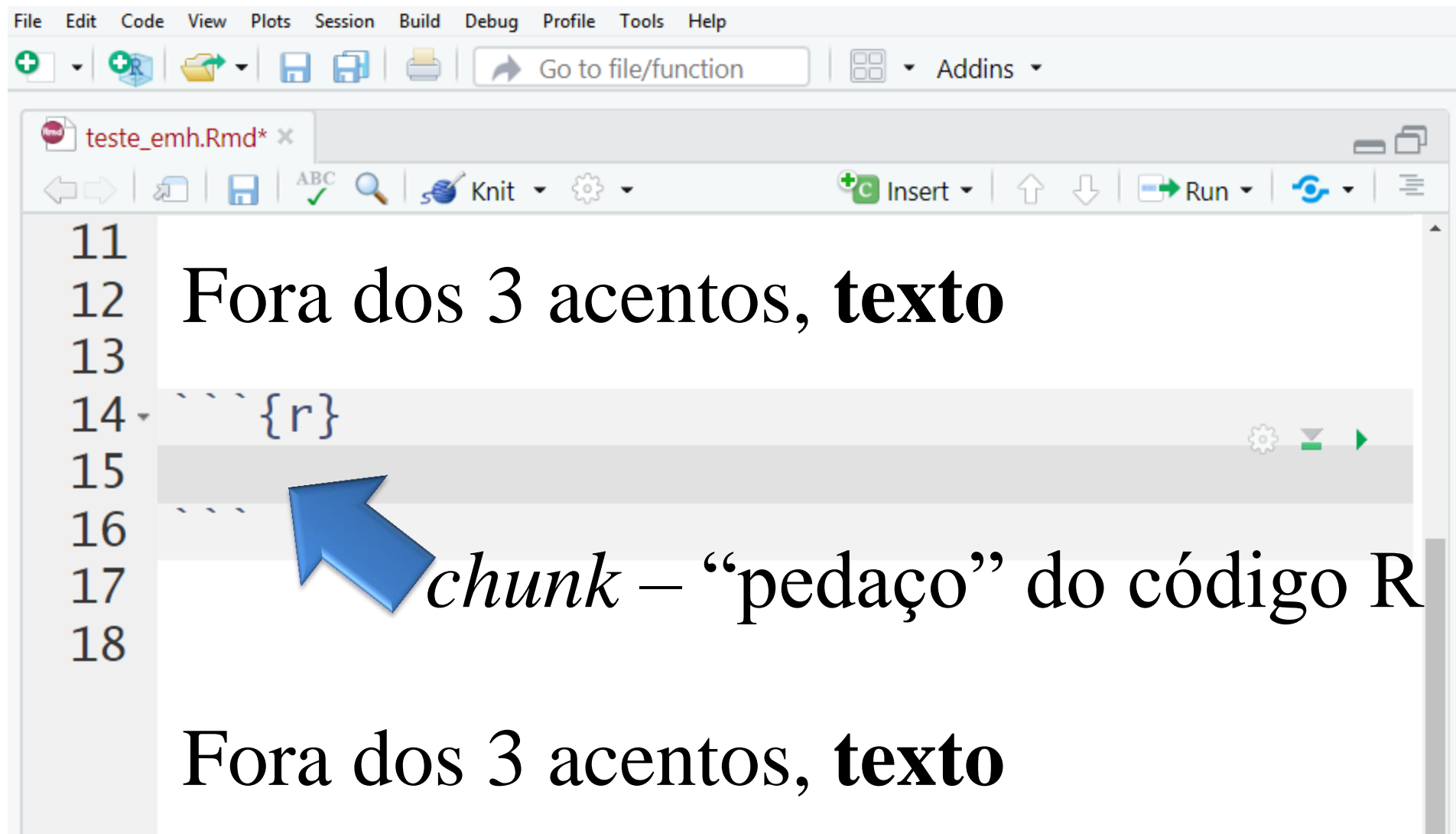
➤ Criar arquivo

Escolher o tipo de arquivo a ser gerado



Tipo de
arquivo

➤ Corpo do arquivo



File Edit Code View Plots Session Build Debug Profile Tools Help

+ +R + Save Print Go to file/function Addins

teste_emh.Rmd*

ABC Knit Insert Run

11

12 Fora dos 3 acentos, **texto**

13

14 `{r}`

15

16

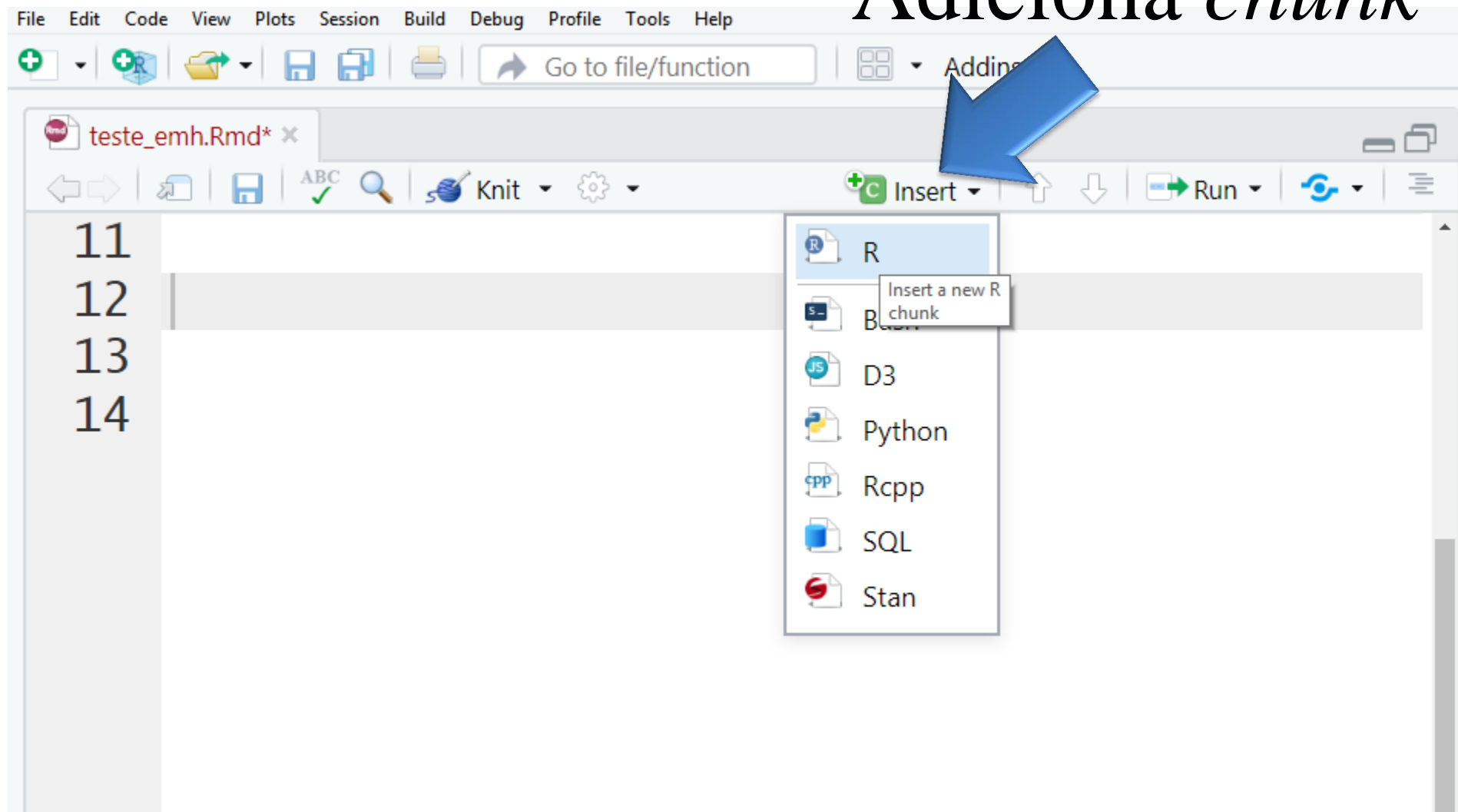
17 *chunk* – “pedaço” do código R

18

Fora dos 3 acentos, **texto**

➤ Corpo do arquivo

Adiciona *chunk*



The image shows a screenshot of the RStudio interface. The top menu bar includes File, Edit, Code, View, Plots, Session, Build, Debug, Profile, Tools, and Help. Below the menu bar is a toolbar with icons for adding a new file, adding a new chunk, saving, printing, and navigating to a file/function. The main editor window shows a file named 'teste_emh.Rmd*' with line numbers 11, 12, 13, and 14. A blue arrow points to the 'Insert' button in the toolbar, which has opened a dropdown menu. The menu lists several options: R, B, D3, Python, Rcpp, SQL, and Stan. A tooltip 'Insert a new R chunk' is visible over the 'R' option.

File Edit Code View Plots Session Build Debug Profile Tools Help

+ + Save Print Go to file/function Adding

teste_emh.Rmd* x

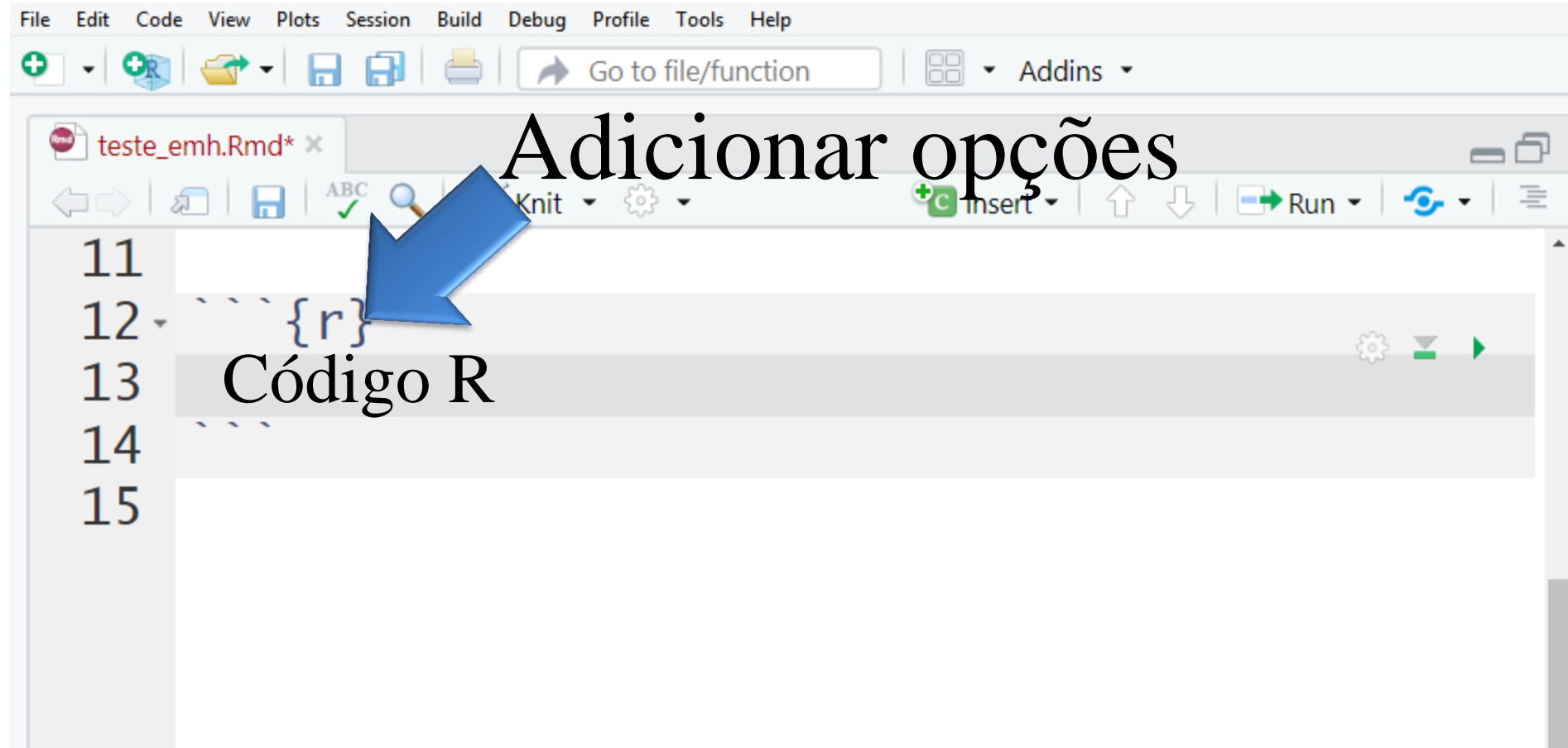
← → ABC Knit ⚙

+c Insert ↑ ↓ Run ↻

- R
- B
- D3
- Python
- Rcpp
- SQL
- Stan

Insert a new R chunk

➤ Corpo do arquivo



The image shows a screenshot of the RStudio interface. At the top, there is a menu bar with options: File, Edit, Code, View, Plots, Session, Build, Debug, Profile, Tools, Help. Below the menu bar is a toolbar with various icons for file operations and a search bar labeled "Go to file/function". The main editor area shows a file named "teste_emh.Rmd*" with a code chunk starting at line 12. The code chunk contains the text "{r}" and is highlighted in grey. A blue arrow points from the text "Adicionar opções" (Add options) to the code chunk. Below the code chunk, the text "Código R" (R Code) is written. The line numbers 11, 12, 13, 14, and 15 are visible on the left side of the editor.

File Edit Code View Plots Session Build Debug Profile Tools Help

Go to file/function Addins

teste_emh.Rmd*

Adicionar opções

Código R

11
12 {r}
13
14
15

➤ Corpo do arquivo

Mostrar código e
saída do R




```
{r echo=TRUE}
```

Código R

➤ Corpo do arquivo

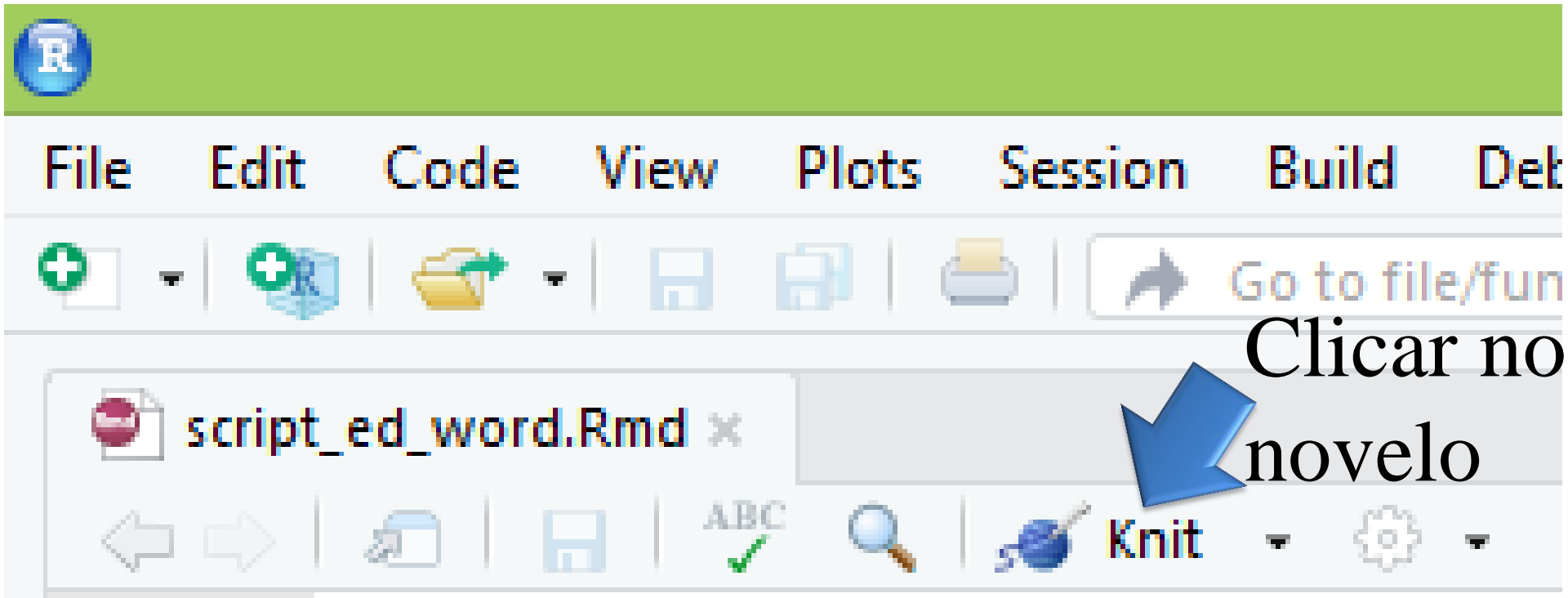
Mostrar saída do R



```
{r echo=FALSE}
```

Código R

➤ Gerar arquivo



Clicar no Knit





Arquivo gerado

Localizar:



Estadística Aplicada

Modelo R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see <http://rmarkdown.rstudio.com>.

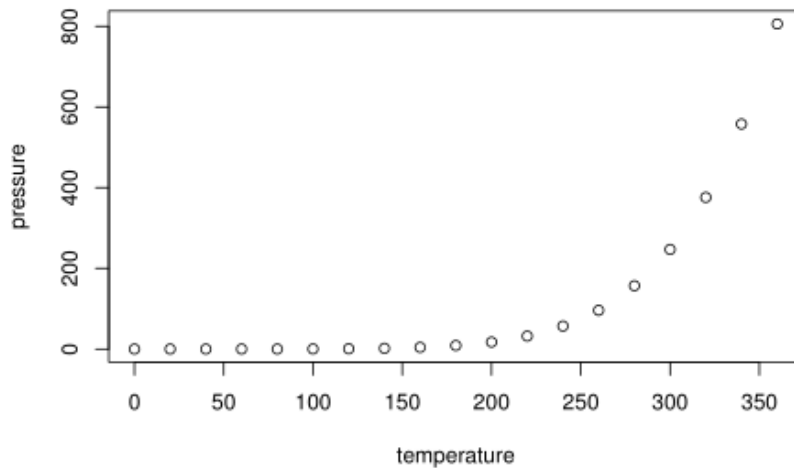
When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

```
summary(cars)
```

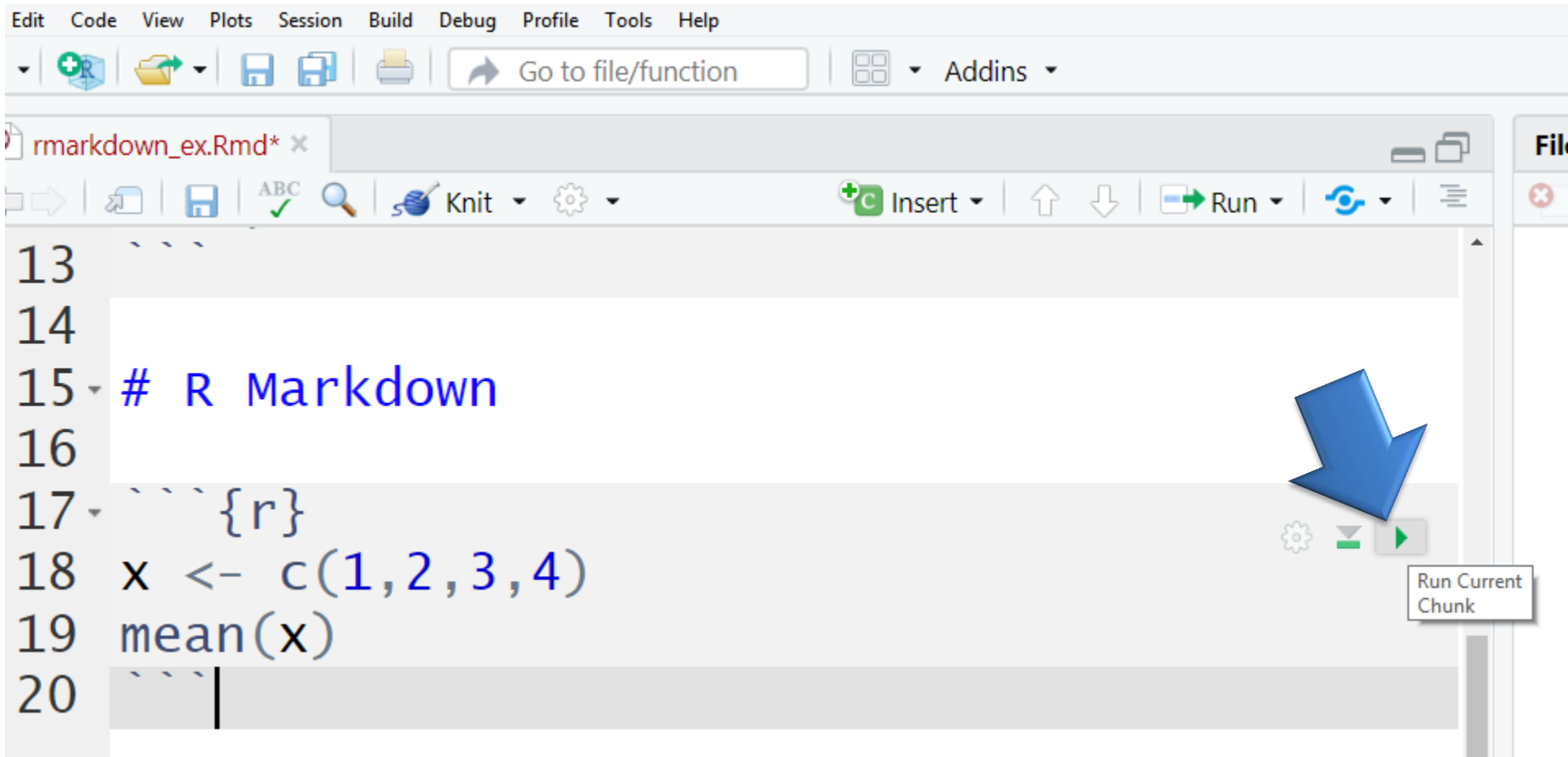
```
##      speed      dist
## Min.   : 4.0   Min.   : 2.00
## 1st Qu.:12.0   1st Qu.: 26.00
## Median :15.0   Median : 36.00
## Mean   :15.4   Mean   : 42.98
## 3rd Qu.:19.0   3rd Qu.: 56.00
## Max.   :25.0   Max.   :120.00
```

Including Plots

You can also embed plots, for example:



➤ Compilar solamente o código

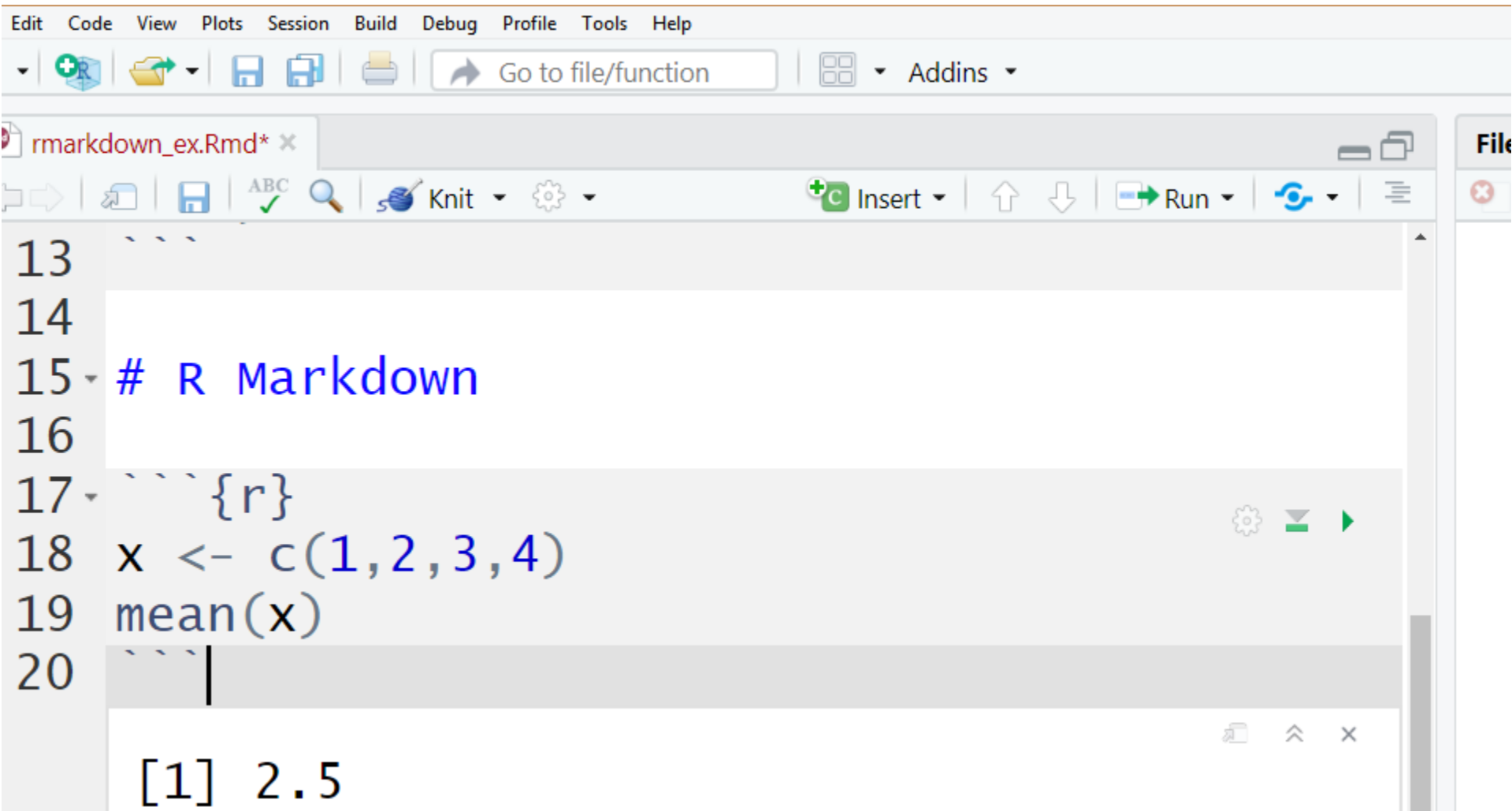


The image shows a screenshot of the RStudio interface. The main editor window displays the following R code in a chunk:

```
13  
14  
15 # R Markdown  
16  
17 ```{r}  
18 x <- c(1, 2, 3, 4)  
19 mean(x)  
20 ```
```

At the bottom right of the code chunk, there is a toolbar with three icons: a gear (settings), a dropdown arrow, and a green play button. A blue arrow points to the green play button. A tooltip box is visible next to the play button, containing the text "Run Current Chunk".

➤ Compilar somente o código



```
13  ```  
14    
15  # R Markdown  
16    
17  ```{r}  
18  x <- c(1, 2, 3, 4)  
19  mean(x)  
20  ```  
  
[1] 2.5
```

Comentário particular: usar esse recurso para códigos mais simples. Escrever o código mais elabora em R, depois de pronto pode ser copiado e colado em uma extensão .Rmd