Comprehension Check: Reproducible Reports

Question 1

1/1 point (graded)

Why might you want to create a report using R Markdown?

- ○ R Markdown has better spell-checking tools than other word processors.
- ● R Markdown allows you to automatically add figures to the final document. ✔
- ○ R Markdown final reports have smaller file sizes than Word documents.
- ○ R Markdown documents look identical to the final report.

Answer

Correct:
R Markdown automatically adds figures to the final document, along with any text describing your project.

Explanation

R Markdown automatically adds figures to the final document, along with any text describing your project.

Submit You have used 1 of 2 attempts

ⓘ Answers are displayed within the problem

Question 2

1/1 point (graded)

You have a vector of student heights called `heights`. You want to generate a histogram of these heights in a final report, but you don't want the code to show up in the final report. You want to name the R chunk "histogram" so that you can easily find the chunk later.

Which of the following R chunks does everything you want it to do?

Which of the following R chunks does everything you want it to do?

```
```{r, histogram, message=FALSE}
hist(heights)
```
```

```
```{r histogram, warning=FALSE}
hist(heights)
```
```

```
```{r, echo=FALSE}
hist(heights)
```
```

```
```{r histogram, echo=FALSE}
hist(heights)
```
```

Answer
Correct:
This chunk is named "histogram" and plots a histogram of the values in the `heights` vector. The argument `echo=FALSE` prevents the code from appearing in the final document, but the figure will be included.

Explanation
This chunk is named "histogram" and plots a histogram of the values in the `heights` vector. The argument `echo=FALSE` prevents the code from appearing in the final document, but the figure will be included.

Submit You have used 1 of 2 attempts

Answers are displayed within the problem

Question 3

1/1 point (graded)

Below is a section of R Markdown code that generates a report.

```
---
title: "Final Grade Distribution"
output: pdf_document
---
```{r, echo=FALSE}
load(file="my_data.Rmd")
summary(grades)
```
```

Select the statement that describes the file report generated by the R markdown code above.

- (●) A PDF document called “Final Grade Distribution” that prints a summary of the “grades” object. The code to load the file and produce the summary will not be included in the final report. ✔
- ( ) A PDF document called “Final Grade Distribution” that prints a summary of the “grades” object. The code to load the file and produce the summary will be included in the final report.
- ( ) An HTML document called “Final Grade Distribution” that prints a summary of the “grades” object. The code to load the file and produce the summary will not be included in the final report.
- ( ) A PDF document called “Final Grade Distribution” that is empty because the argument `echo=FALSE` was used.

Answer
Correct:
The `title` and `output` specify the name and type of report to be generated. The `summary` command produces a summary of the object and `echo=FALSE` means that the code will not appear in the final report, only the output of the summary.

Explanation
The `title` and `output` specify the name and type of report to be generated. The `summary` command produces a summary of the object and `echo=FALSE` means that the code will not appear in the final report, only the output of the summary.

Submit You have used 1 of 2 attempts

Answers are displayed within the problem

Question 4

1/1 point (graded)

The user specifies the output file format of the final report when using R Markdown.

Which of the following file types is NOT an option for the final output?

- (●) .rmd ✔
- ( ) .pdf
- ( ) .doc
- ( ) .html

Answer
Correct: The .Rmd files are the R Markdown files themselves, not the final reports.

Explanation
The .Rmd files are the R Markdown files themselves, not the final reports. R Markdown can generate PDF, Word, and HTML files as final reports.

Submit You have used 2 of 2 attempts

ℹ Answers are displayed within the problem

Question 5

1/1 point (graded)

```
```{r, echo=F}
n <- nrow(mtcars)
```
Here `r n` cars are compared
```

What will be the output for the above Rmarkdown file?

- (●) The only output is the text: `Here 32 cars are compared` . ✔
- ( ) Since we have `echo=F` , the code chunk is not evaluated, therefore we will have both the code and the text: `Here `r n` cars are compared` .
- ( ) The code will be displayed as well as `Here 32 cars are compared` .

R cannot comprehend the value of n, we will get an error.

Explanation
In Rmd, inline code can access the same environment where other variables lie. Since we have $echo = F$, the code itself will not be displayed, but it is evaluated. Therefore rn can locate the variable named n and appear in the output.

Submit You have used 1 of 2 attempts

Answers are displayed within the problem

Question 6

1/1 point (graded)

```
```{r eval=FALSE)
a <- 2
```

```{r include=FALSE}
print("Hello World!")
a <- 5
```

```{r echo=FALSE}
a <- a+1
print(a)
```
```

What is the final value from the above three sequential Rmd code chunks?

- 2
- 3
- 6 ✔
- 5

Explanation

`include=FALSE` is used when you want the code evaluated but prefer it not appearing as output. `eval=FALSE` is used when you do not run the code chunk at all. `echo=FALSE` displays only the output from the code chunk but does not print the code.

Submit You have used 1 of 2 attempts

Answers are displayed within the problem