Template using manual toggle between questions & solutions

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2021-03-17

Instructions

If you are not familiar with the syntax of R and/or Markdown, simply:

1. open the source code, which has the file extension "Rmd", in RStudio;
2. click the black triangle next to the ***Knit*** button;
3. click the ***Knit to <required file format>*** button, and the generated document will pop up;
4. toggle between `include = FALSE` & `include = TRUE` below, which correspond to the questions (only) and the solutions, respectively, and see the differences in the generated documents;
5. try changing the questions & solutions below & observe the difference in the generated document;
6. read the content of the questions & solutions in this file (no matter it is the source code or generated document) for more information.

In the source code, a code chunk starts with a line of triple backticks & the curly bracket pair, and ends with a line of triple backticks. Everything in-between will be evalulated by `R`.

Question 1

TYPE YOUR QUESTION HERE.

Question 2

(This is not really a question but an explanation - see above.) You type the "normal" text, usually the question, in a line without any "environment" i.e. there are no backticks, quotes, or hashtags etc. before or after the line. If you want `R` to evaluate something inline, type

1. a single backtick, then
2. the character "r" followed by a space, then
3. the expression in `R` you want to evaulate, and finally
4. another single backtick.

See how it is done in the source code: $1 + 2 = 3$. You will also see that maths being typeset between a pair of single dollar signs are allowed.

Question 3

This is a "pure" maths question, with no statistical or data analysis in `R` required. Prove that

$$(a + b)^2 = a^2 + 2ab + b^2.$$

(In the source code you will also see that maths typeset between a pair of double dollar signs are allowed. Other LaTeX environments allowed are `align`, `equation`, `eqnarray`, their no-numbering versions i.e. with asterisks, and `\[ \]`.)

Question 4

This is a data analysis question. Plot the `cars` data set that is available in `R`.

Question 5

What if I want to evaluate something in `R` but not print the output? Or what if I want to show the code but not evaluate it? More generally, what if I want to customise the printing of some/all of the `R` code, numerical output, and graphical output?

Question 6

What do I need to be aware of when modifying this template?