Generating questions and solutions documents from the same R Markdown document

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2020-02-01

Introduction

- This example R Markdown document demonstrates how to include questions and answers in the same Rmd document.

- When rendering the questions, in the YAML header set `solutions: FALSE`

- When rendering the solutions, in the YAML header set `solutions: TRUE`

- If rendering using the knit button the output filename will end `-solutions.extension` due to the custom knit function which I modified from Yihui Xie's advice here.

Questions

- To generate pdf output you need the TinyTeX package installed, `install.packages('tinytex')`.

- Paragraph text for questions is written in standard R Markdown syntax, which can include LaTeX maths and code chunks.

- In questions, R code chunks for which you want to see the code or output or both require the chunk option `include=TRUE`, i.e.

```
```{r, include=TRUE}
...code...
```
```

Solutions

- I have chosen to render the solutions as the `html_document` output but any output format could be used.

- Paragraph text for solutions go in `asis` code chunks, i.e.

```
```{asis}
...Text explaining the answer ...
```
```

Paragraph text for answers.

- R code chunks for solutions are included as normal, i.e.

```{r}
...Code for answer...
```

- You can use your preferred R Markdown syntax for laying out your questions. I often use simple section headers, e.g.

```
# Question 1
```

- For numbered sections add the option `number_sections: true` to the output in the YAML header.

Example R code chunk

```r
curve(x^2)
```