

Generating questions and solutions documents from the same R Markdown document

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Introduction

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

Questions

- I have designed the question sheet to be compiled as the `pdf_document` output.
- 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 ...
```
```

- 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.