Exercise 3

Let's try use some of the things we learnt in the last section. If you get stuck at any point put your hand up and I'll come over to help.

1. Create a document `packages.tex` in the `sage_latex` folder.

2. In `packages.tex` recreate the following table with the help of the `booktabs` package:

	£m	$m (exchange rate as of 31.07.2018)
Funding Council Grants	70.0	91.7
Academic fees and support grants	252.4	330.6
Research grants and contracts	109.4	143.3
Other operating income	73.7	95.5
Endowment income and interest	5.6	7.3
Total	**511.1**	**669.5**

Table 1: Newcastle University income (year ended 31 July 2018)

3. Add a label to the table and refer to it in the text "See Table 1", using the `cleveref` package. *Recall:* labels must be attached to the `caption` of the table.

4. Add the `hyperref` package to the document's preamble. Compile `packages.tex`. *Note:* `hyperref` must be loaded before `cleveref` in the preamble.

5. Take a look at this list of options that `hyperref` can take. Pass options to `hyperref` so that:

   i) Links do not display with boxes around them
   ii) Links are indicated by coloured text
   iii) All links are coloured magenta

   Hint: take a look at the options `hidelinks`, `colorlinks` and `allcolors`.

6. *Harder:* Download this dataset. On a new page use `pgfplotstable` to read in `titanic35.csv` and construct a table from the data. Once you have this then you should:

   i) Wrap `pgfplotstabletypeset` in a `table` environment

   ii) Insert a `toprule` before the header row, and a `midrule` after the header row.

   iii) Insert a `bottomrule` after the last row.

   iv) Style the `Fare` column so that all the fares are shown to two decimal places.

   v) Align the entries in the `Fare` column by their decimal point. *Hint:* pass the argument `dec sep align` to the `Fare` column style.

   vi) Right align the content in the `Sex` column and the `Age` column. *Hint:* look up the `column type` argument.

   vii) Add a table stripe to every even row. *Hint:* Check out the `every even row` argument, and include `\usepackage[table]{xcolor}` in your preamble.