cp8_assignment_instructions

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Exercise 1

Run `?anscombe`, briefly research who Anscombe was and write a short description, assigned to the variable `whoWasAnscombe`

Exercise 2

Use sapply to calculate the mean and variance of columns y1-y4 in `anscombe`. Assigned to `anscombeMeans` and `anscombeVar` respectively.

Why is this response problematic?

Exercise 3

run the following code in your script

```
anscombe_tidy <- anscombe %>%
  pivot_longer(x1:y4) %>%
  group_by(name) %>%
  # Add a unique ID number to each group
  mutate(row = row_number()) %>%
  # Split the column at the first appearance of a number
  separate(name, into = c('xy','group'), sep = "(?<=[a-zA-Z])\\s*(?=[0-9])") %>%
  pivot_wider(names_from = xy, values_from = value) %>%
  select(-row)
```

Exercise 4

Finally, lets make a ggplot! Within `aes` assign x to x and y to y, use `anscombe_tidy` data to generate a plot with `geom_point()`. Assign your plot to `firstGGplot`.

Exercise 5

Lets add some specifics about `group` to `shape` and `color`. First, assigned to `colorPlot`, assign `group` to `color` within your `aes()`. Next, assigned to `shapePlot`, assign `group` to `shape` within `aes()`. Finally, assigned to `greatPlot`, assign `group` to both `shape` and `color`.

Exercise 6

Now to draw each `group` in a separate set of axis, use the facet_wrap function, specify that your `facet_wrap` makes 2 rows. Add the `facet_wrap` to `greatPlot` from before, updating `greatPlot`.

Like this: `greatPlot <- greatPlot + facet_wrap()`

Exercise 7

Lets add a line of best fit to each `group`! We'll again update our `greatPlot`, this time adding the `stat_smooth` function.

Exercise 8

IN every plot you make, label everything! Lets add labels to our `greatPlot` using the `labs` function. Updating your `greatPlot` just like before.
Be sure you label `x`, `y`, `title`, `subtitle`, `caption`, and `color`.

Exercise 9

Finally, add `theme_minimal()` to your `greatPlot`, assign the new plot to `bestPlot`.