**Premier league data – activity questions**

## Part A: Sorting and filtering

**As you sort and filter the data, compare your results with the person next to you!**

1. When you begin this activity, the sheet is sorted by Position. Select all the columns and sort the data alphabetically by team name instead.
2. Try sorting the data by each of the categories: Wins, Losses, Draws. Which order most closely matches up with the order according to Position?
3. Use filters to display:
	1. Teams that did not compete in the previous season (that is, teams whose 17/18 position is “n/a”)
	2. Teams that won 15 games
	3. The top ten teams by position (hint: your filter condition should look for a position of less than or equal to 10)
4. Switch to the sheet “Analysing the data” for parts B, C, and D below.

## Part B: New functions

1. Use the COUNTIF function to count how many teams:
	1. Won fewer than 10 games
	2. Won exactly 10 games
	3. Won more than 15 games

Tip: If the data is sorted according to the column you are analysing, you can verify your answer by counting the teams yourself! Make sure to select only the columns containing the data, and not the whole sheet.

1. Use the COUNTIF function to count how many teams:
	1. Drew fewer than 7 times
	2. Drew exactly 7 times
	3. Drew more than 10 times
2. Use the COUNTIF function to count how many teams:
	1. Lost fewer than 10 games
	2. Lost exactly 10 games
	3. Lost more than 15 games
3. Use the AVERAGE function to find the average number of times a team drew in a game.
4. Use the AVERAGE function to find the average goal difference. Try to format your answer as a whole number or a number with only one or two decimal places.
5. In the ‘Improved’ column, use the IF function to display the text “Yes” if the team placed in a better position than in the 2017/2018 season and “No” otherwise.

## Part C: Revision exercises

1. Use the MAX and MIN functions to find:
	1. The highest number of each of: goals for, goals against, goal difference
	2. The lowest number of each of: goals for, goals against, goal difference

Tip: If the data is sorted according to the column you are analysing, you can easily verify your answer!

1. Insert a new column next to the ‘Played’ column. In it, use the SUM function to calculate the number of matches played by each team based on the number of wins, losses, and draws. You can use the existing ‘Played’ column to check your answers.
2. Create a bar chart showing the number of wins for each team.

## Explorer tasks

### Functions & formulas

* Investigate the COUNT function and how it is different from COUNTA and COUNTIF.
* Create a document that stores all of the functions and formulas you know.
* Insert a new column next to the ‘Points’ column. In it, see if you can you create a formula that calculates the points for each team. You can use the existing points column to check your answers.

### Charts

* Add more series to your chart so that the chart also shows the number of losses and draws for each team.
* Find and try out the ‘stacked’ option for your chart, and see if you can understand it.

This resource is available online at [ncce.io/sprs-5-a3-hd](http://ncce.io/sprs-5-a3-hd). Resources are regularly updated — please check that you are using the latest version.

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