

Student	Cieran Hughes	83.5
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Part 1

	Available	Marks
Load <i>iris.xlsx</i> data into data frame	3	3
Headers are correct	1	1
Species names are a factor	1	0
Loop for <i>iris Setosa</i>	4	4
Loop for <i>iris Versicolour</i>	4	4
Loop for <i>iris Virginica</i>	4	4
Binding results to <i>irisSummary</i>	3	3
Pearson correlation	5	5
Labelled scatterplot	5	5
Correct use of function	3	3
Calculation for <i>iris Setosa</i>	3	3
Calculation for <i>iris Versicolour</i>	3	3
Calculation for <i>iris Virginica</i>	3	3
Binding results to <i>irisSummary</i>	3	3
Commenting, white space, and code presentation	5	3
Comments Doing everything in functions is very effective. Remember that every function should start with a substantive comment to explain what the function does, what parameters are passed into it and what is returned. The species should have been imported as a factor using <i>stringsAsFactors=TRUE</i> . Excellent work.		

Part 2

	Available	Marks
Load <i>Kicks.xlsx</i> into <i>kickData</i> data frame	5	5
Generate statistics for air-filled balls	7	7
Generate statistics for helium-filled balls	7	7
Binding results to <i>kickSummary</i>	1	0.5
Removing the outliers	10	7
Performing the t-test	5	3
Extract data for Neil	4	4
Extract data for Jonny	4	4
Test for significant difference	2	0
Commenting, white space, and code presentation	5	3
Comments It would be much more usual to make <i>kickSummary</i> a three-column data frame with columns for labels, air-filled, and helium-filled. Again, remember that every function should start with a substantive comment to explain what the function does, what parameters are passed into it and what is returned. The Shapiro test for air shows that it has $p > 0.05$, so the data is normal and doesn't need any outliers removing. The helium data has $p < 0.05$, so here the outliers need to be removed. The removal process is good. The t-test is carried out correctly, but interpreted incorrectly. Here $p > 0.05$ so there is no significant difference and the null hypothesis is accepted. You need to do another t-test to see if the difference between the means for Neil and Jonny are significant. Excellent work.		