Learning Outcome Addressed:

- Explore how clustering can be used to help businesses learn more about their customers.

This is a required activity and will count toward course completion.

In this section, you will open the same Codio assignment you used in: **Assignment 4.2 (https://classroom.emeritus.org/courses/9054/assignments/212066?module_item_id=1506965)** . After you have spent some time getting re-familiarized with the code segments, you will answer some short questions regarding the concepts displayed.

Attempt History

	Attempt	Time	Score
KEPT	**Attempt 3**	2 minutes	5.67 out of 6
LATEST	**Attempt 3**	2 minutes	5.67 out of 6
	Attempt 2	2 minutes	5.33 out of 6
	Attempt 1	472 minutes	4.33 out of 6

Score for this attempt: **5.67** out of 6
Submitted Apr 20 at 5:16pm
This attempt took 2 minutes.

Question 1 — 0.67 / 1 pts

Select the true statements

orrect Answer

- [ ] Most people who take the survey are male
- [ ] Safety is more important than the gender of the buyer
- [ ] Safety is more important than power

Correct!

- [x] Reliability is more important than comfort

Correct!

- [x] Technology is more important than interior

Question 2

1 / 1 pts

True or false: The automotive survey data must be normalized before being processed.

- [ ] True

Correct!

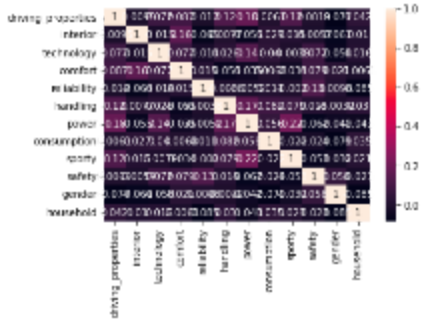
- [x] False

That is correct! There is no need to normalize the data because it is already normalized between 0 and 1.

Question 3

1 / 1 pts

Which of the following features is the most correlated to “Sporty”



- [ ] Interior

Correct!

- [x] Power

Technology

Handling

That is correct! Power is most correlated to “sporty”.

Question 4

1 / 1 pts

When performing Hierarchical clustering using the dendrogram, what was the size of each cluster when the cluster count is 3?

191,301,299

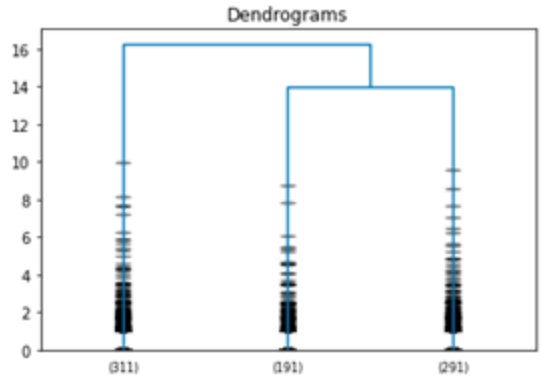
Correct!

311, 191, 291

200,200,200

189,116,357

That is correct! Please refer to the following dendrogram:



Question 5

1 / 1 pts

Using K-means clustering you are able to see how the importance of each vehicle feature has an effect on the clusters. From this, which three features contribute to a customer falling into the same cluster?

(Select all the apply)

Correct!
- [x] Power

Correct!
- [x] Technology

Correct!
- [x] Driving priorities
- [ ] Reliability
- [ ] Interior

That is correct! The importance of driving priorities, power, and technology place the customer in the rightmost cluster.

Question 6

1 / 1 pts

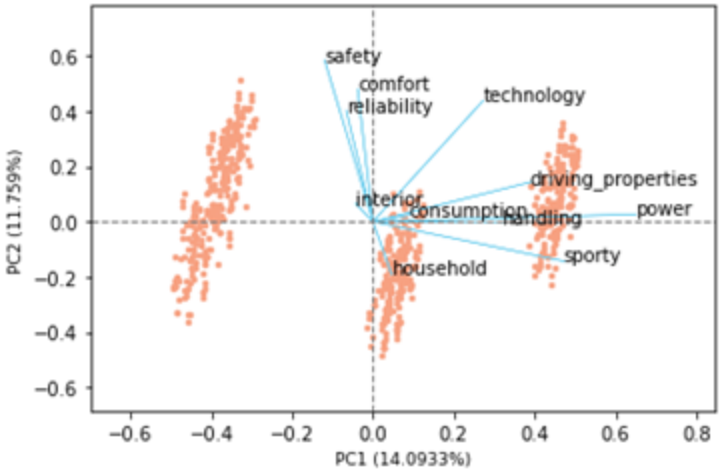
Why is the Principal Component Analysis algorithm necessary before interpreting K-means?

- To compute each point's distance to find the closest cluster
- To extract outliers in the data
- To sort the data into likewise clusters

Correct!

To flatten the three-dimensional data frame to two dimensions to be plotted

That is correct! Since the data frame represents multiple features per input, we must transform the model to be interpreted by a two-dimensional scatter plot.



Quiz Score: **5.67** out of 6