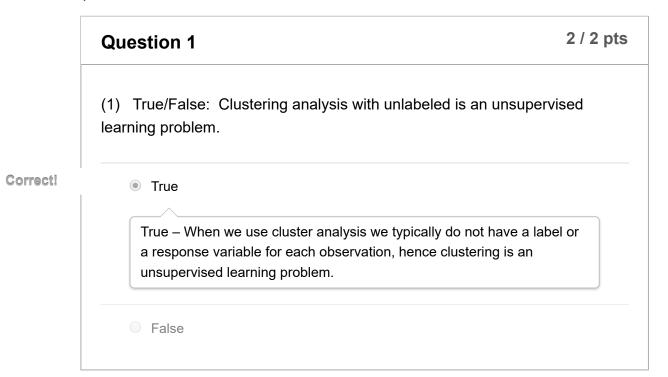
# Quiz 8 - Week #8

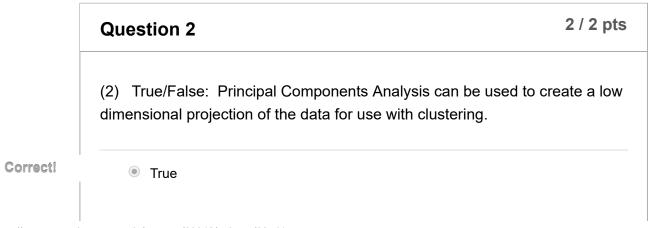
Due No due date Points 20 Questions 10 Time Limit None

# **Attempt History**

LATEST Attempt 1	6 minutes	16 out of 20	

Score for this quiz: **16** out of 20 Submitted Mar 3 at 7:46pm This attempt took 6 minutes.





2 / 2 pts

True – Cluster analysis is better performed in lower dimensions than higher dimensions. One way to reduce the dimension (and get orthogonal variables) is to use Principal Components Analysis to transform your data.

False

### Question 3

(3) True/False: A hierarchical clustering model can be visualized using a dendrogram.

### Correct!

True

True – The 'tree' plot used for visualizing both hierarchical clustering models and decision tree models is called a dendrogram.

False

# Question 4 2 / 2 pts

(4) True/False: Common factors estimated using Iterated Principal Factor Analysis with a VARIMAX rotation are orthogonal.

### Correct!

True

True – The VARIMAX rotation is an orthogonal rotation, and hence the rotated common factors will be orthogonal to each other.

False

# Question 5 2 / 2 pts

(5) True/False: In cluster analysis the choice of similarity measure will affect the cluster assignments.

### Correct!

True

True – The most common similarity measure is Euclidean distance. Other distance measures, or metrics, will yield different results. Some measures are more preferred over other metrics given the type of data or other data properties.

False

# Question 6 2 / 2 pts

(6) True/False: When computing principal components the data should be standardized, i.e. the data should be centered and scaled to a (0,1) distribution.

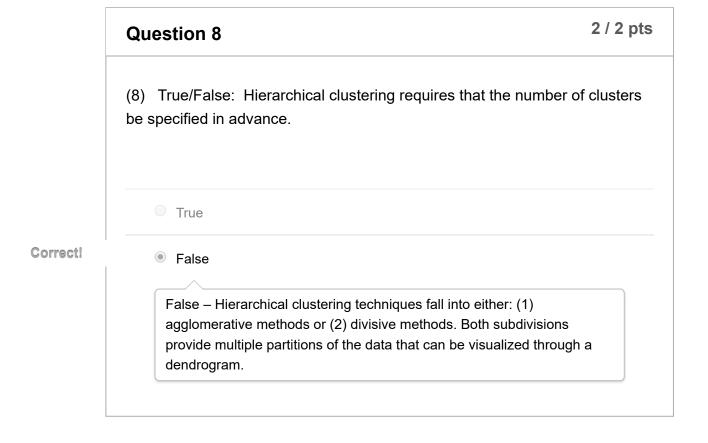
### Correct!

True

True – Since principal components analysis aims to explain the variance in the data, all of the variables should be on the same scale. If the variables are not on the same scale, then PCA will consider the variables with the larger scale to be more important.

False

# Question 7 (7) True/False: Cluster analysis can only be performed on continuous variables. True False False False – Cluster analysis can be performed on discrete variables, but the correct similarity measure must be used.



Question 9 0 / 2 pts

(9) True/False: In K-means clustering observations are allowed to belong to more than one cluster.

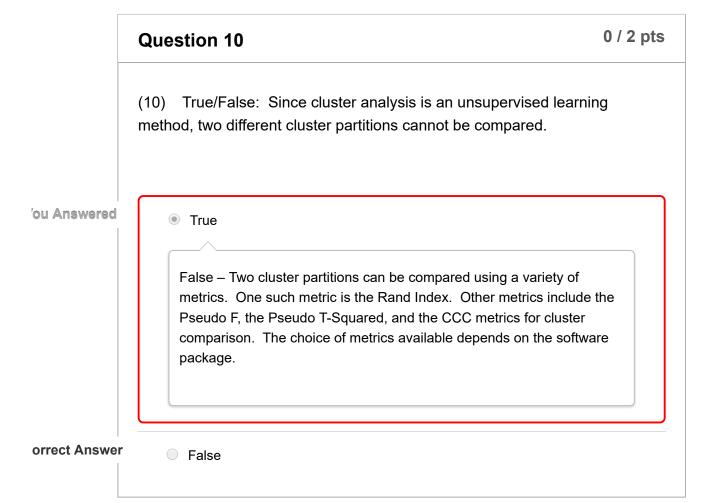
'ou Answered

True

False – In K-means clustering observations are only allowed to belong to a single cluster. Clustering algorithms that allow observations to belong to more than one cluster are called fuzzy clustering.

orrect Answer

False



Quiz Score: 16 out of 20