1. **(1 Pt.)** State ***three*** assumptions of *k*-means clustering.

2. **(1 Pt.)** State ***three*** data preparation steps that should be considered before conducting a clustering analysis.

3. **(1 Pt.)** ***True or False***: Squared error from cluster centroids nearly always decreases when adding more clusters into an analysis.

4. **(1 Pt.)** State ***four*** mathematical or statistical techniques for determining the number of clusters in a data set.

5. **(1 Pt.)** State ***two*** drawbacks of hierarchical clustering.