Week 7 - Check Your Understanding

1. In classification, K-nearest neighbors (KNN) model predict based on the minority outcome/response of the K nearest neighbors
   1. True \*b. False
2. To compute a prediction of 1NN for a new data point A, on a dataset with 100 data points, one needs to calculate how many distances?

* \*a. A hundred distances from all the points to point A
  1. One distance

1. The larger the value in KNN models, the higher the train errors.

* \*a. True
  1. False

1. The prediction of KNN models with the same value still depends on the selection of distance measurement.

* \*a. True
  1. False

1. One should not standardize the data before building a KNN model.
   1. True \*b. False
2. In weighted KNN, the closer the neighbor, the higher the weights it has

* \*a. True
  1. False

1. KNN models with weighted distance and uniform distance should always produce the same prediction.
   1. True \*b. False
2. KNN can be computationally expensive due to the amount of distance need to be calculated

* \*a. True
  1. False

1. KNN may not perform well in a higher dimension data due to the requirement of a large amount of data

* \*a. True
  1. False