

Project 1

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**Problem 1

a)

Quantative: Time, income earned, horsepower of a car. Qualitative: Marital status, origin, Gender.

b) KNN, LDA, QDA can be used for multi-class classifications.

c)

d) The nearest neighbour for $k=1$ is a blue dot, so our classification is blue. For $K=3$, two of the nearest neighbors are red and 1 blue. This gives $2/3$ red, so it is red. For $K=5$ we have $3/5$ red, so it is red.