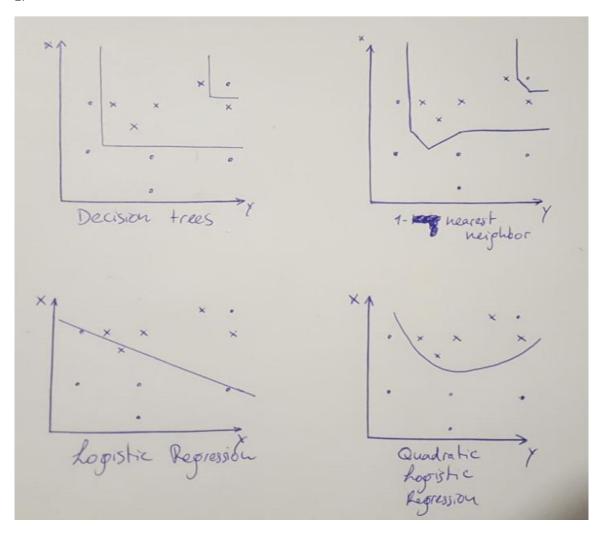1.



2.

Since both the **Decision Tree** algorithm and the **1-Nearest Neighbor** produce boundaries that divide the datasets perfectly, so these are the preferable ones.

As these are already working perfectly in this case, it is difficult to think of an alternative or combination that would create a better solution. However, as these algorithms are both quite difficult, one could also choose to go for a more less-computational difficult one, like Logistic Regression, as in this case it only misclassifies one point. Especially when adding more terms than just a quadratic one, it might start to fit better. Think of an ellipse (so a perturbed version of x^2 + y^2 for example) around the point (5,5). This will however increase the computational power necessary again.