Problem1

1-(a). flexible leraring method to be better

1-(b) flexible leraring method to be worse

1-(c) flexible leraring method to be better

1-(d) flexible leraring method to be worse

Problem2

1. Regresson/ predication/ n=500 / p = profit, employeses, industry
2. Classification/ prediction/ n=20 / p = 13 price charged for the product, marketing budget, competition price, and ten other variables.
3. Regression/ prediction / n = 52 / p 3 us market, british market, german market

Problem6

Parametric method 는 데이터 모델 모양을 선정하고 트레이닝 데이터에 너무 의존하여 variation이 , Non-Parametric은 그렇지 않다.

Problem7

(a)

obs1 <= c(0, 3, 0),

obs2 <= c(2, 0, 0),

obs3 <= c(0, 1, 3),

obs4 <= c(0, 1, 2),

obs5 <= c(-1, 0, 1)

obs6 <= c(1, 1, 1)

obs0 <= c(0, 0, 0)

(dist1 <= sqrt(sum((obs1-obs0)^2)) )

(dist2 <= sqrt(sum((obs2-obs0)^2)) )

(dist3 <= sqrt(sum((obs3-obs0)^2)) )

(dist4 <= sqrt(sum((obs4-obs0)^2)) )

(dist5 <= sqrt(sum((obs5-obs0)^2)) )

(dist6 <= sqrt(sum((obs6-obs0)^2)) )

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\_\_Part b)\_\_

\* closest 1 neighbor is obs5

\* prediction = \_\_Green\_\_

\_\_Part c)\_\_

\* closest 3 neighbors are obs5, obs6, obs2

\* prediction = \_\_Red\_\_

\_\_Part d)\_\_

best value of K should be smaller to be able to capture more of the non-linear decision boundary