Homework (Due 021011)

1. # 1.35{36. NKNW.

2. I.1, I.2 on P 385{386, Sche e.

3. Let $Y_i = i; X_i = i; i = 1; \quad ; 4:$ Consider the general linear models in matrix representation Y = X + $:$ and identify $X;$ and when the relation between Y and X is
   a) $Y = \ _0 + \ _1 X +$
   b) $Y = \ _0 + \ _1 X + \ _2 X^2 +$

4. A scientist claims that regression models is useless because in the real world the relation between two variables is seldomly linear. Discuss this comment.

5. Under G-M condition, de ne $e_i = Y_i \quad \hat{Y}_i$. Show that $var(e_i) = \ ^2 \quad var(\hat{Y}_i):$

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