Experimental Design (Försöksplanering)

Assignment- 6

(Due date: January 14, 2013)

- 1. Consider the 2^2 design in two blocks with AB confounded. Prove algebraically that $SS_{AB} = SS_{Blocks.}$
- 2. An experimenter wishes to compare eight treatments in blocks of four runs. Find a BIBD with 14 blocks and $\lambda = 3$.
- Any analysis of variance model can be expressed in terms of the general linear model y = xβ + ε, where the X matrix consists of 0s and 1s. Show that the single-factor model y_{ij} = μ + τ_i + ε_{ij}, i= 1, 2, 3, j=1, 2, 3, 4 can be written in general linear model form. Then write the normal equations (X'X)β = X'y and compare them with the normal equations found for this model in chapter 3.