

# Homework 7

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1. (7.1) State the number of degrees of freedom that are associated with each of the following extra sums of squares:  $\text{SSReg}(X1 \mid X2)$ ,  $\text{SSReg}(X2 \mid X1, X3)$ ,  $\text{SSReg}(X1, X2 \mid X3, X4)$ ,  $\text{SSReg}(X1, X2, X3 \mid X4, X5)$ .

A note about the notation.  $\text{SSReg}(A \mid B)$  is the extra sum of squares that appeared as a result of including variables A into the regression model that already had variables B in it. Thus, it is used to compare the full model with both A and B in it against the reduced model with only B.