

**Exer 7.1**

[E/E114]

The  $R^2$  statistic is the ratio of the variance of the fitted values to the variance of the response variable.

Using the kidsfeet data:

1. Find the variance of the response variable in the model  $\text{width} \sim \text{sex} + \text{length} + \text{sex}:\text{length}$

0.053 0.119 0.183 0.260 0.346 Exer 7.1-1

2. Find the variance of the fitted values from the model

0.053 0.119 0.183 0.260 0.346 Exer 7.1-2

3. Compute the  $R^2$  as the ratio of these two variances. 0.20 0.29 0.46 0.53 0.75 Exer 7.1-3

4. Is this the same as the “Multiple  $R^2$ ” given in the summary(mod) report? Yes No Exer 7.1-4