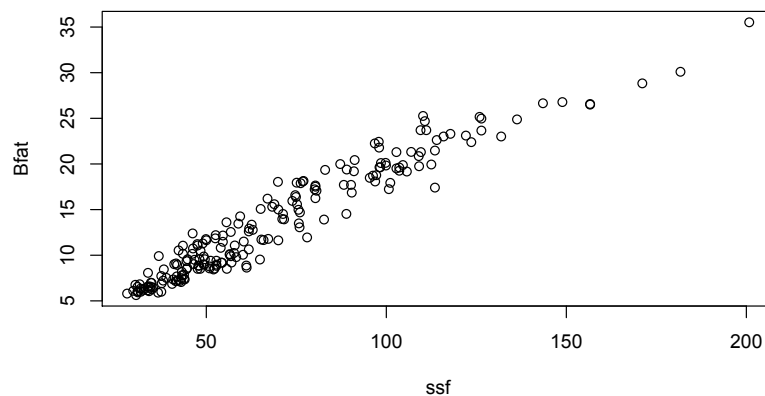


6. Body fat can be quickly estimated by taking a sum of skin folds (ssf) measurement. A more accurate body fat (Bfat) measurement can be found by immersing the subject in water. Data were collected recording the sum of skin folds and body fat in 202 subjects to study the relationship between the two measures of body fat.

(a) A linear regression was used to study the relationship



between ssf and Bfat, but the residual plot showed that the linear model is not appropriate.

- (i) Outline in detail an alternative method for studying the relationship between ssf and Bfat.
 - (ii) Outline how any user defined quantities in your method are chosen in practice.
- (b) Describe how other measurements from the subjects could be included in a model to predict body fat (Bfat). Explain how this model would be fitted.