Applied Statistical Methods - Exercise 4

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Problem 1: Sum Contrasts

Use the following dataset on `Body Weight` and `Breed` of beef cattle animals. The data is available from

```
## [1] "https://charlotte-ngs.github.io/asmss2023/data/asm_bw_breed.csv"
```

Fit a fixed linear model with `Body Weight` as response and `Breed` as predictor variable. Use the `sum` contrasts for reporting the different effects in the model. Validate the estimates by computing the estimates based on a solution of the least squares normal equations.

Problem 2: Custom Contrasts

Use the dataset from Problem 1 and use your own contrasts. Your new contrasts should compute the intercept estimate as is done in the `sum` contrasts. The `Breed` effects should be computed the same way as is done in the `treatment` contrast.