

## sat.r: Additional Explanation on computing Sum-of-Squared Errors

This is additional information explaining the last bit of the sat.r code. This code shows how to compute the sum of squared errors for a model.

**Computing Sum-of-Squared Errors: `sum(resid(sat.lm)^2)`**

`resid()` returns the residuals for the specified model. To get the SSE, square those residuals and sum them.

**Computing Sum-of-Squared Errors - 2nd option: `anova(sat.lm)`** (not in the sat.r code)

A second way to get the SSE is to use the `anova()` function. This gives you the sequential SS for each term in the model. The value in the SS column for the last row, labelled **Residual** is the SSE.

**Extracting the error sd, = root MSE: `sigma(sat.lm)`**

Previous code illustrated how to extract one of the named components reported by `summary()`. R is moving to creating functions that extract information without having to find the names for the bit you want. `sigma()` is one such function. It extracts the error sd from a fitted `lm()` model.