- We can also assess how good our model is by using the F-test.

- The F-test is based on the ratio of the improvement due to the model (SS_M) and the difference between the model and the observed data (SS_R).

$$F = \frac{MS_M}{MS_R}$$

- Rather than use the sums of squares themselves, we use the mean sums of squares (MS_M and MS_R).

- A good model will have large MS_M and a small MS_R

- In other words, the improvement of the model compared to the mean will be good.

- The difference between the model and our observed data will be small.

$$F = \frac{MS_M}{MS_R}$$