

3.10: Chapter 3 Summary

The primary focus in this chapter was to establish the foundation for developing mathematical models for a one-way ANOVA setting. The effects model was then discussed along with the ANOVA model assumptions and diagnostics. The other focus was to illustrate, using the greenhouse example, how SAS and Minitab can be utilized to run an ANOVA model. Sections 3.3-3.6 were devoted to this purpose and include details on SAS and Minitab ANOVA basics, together with guidance in the interpretation of the outputs. Software-based diagnostics tests to detect the validity of model assumptions were also discussed, along with the power analysis procedure which computes any one of the four quantities of sample size, power, effect size, and the significance level, given the other three.

The next chapter will be a continuation of this lesson. Three more different versions of ANOVA model equations that represent a single factor experiment will be discussed. These are known as **Overall Mean**, **Cell Means**, and **Dummy Variable Regression** models.

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