

Part I. (30 points) Do all calculations in $\text{L}^{\text{T}}\text{E}^{\text{X}}$ + R + knitr. For this assignment, all R code should be well commented and be visible (`echo=TRUE`) in the document where you have written it. Every time you create or modify an object, please show the results with the appropriate function. Please do not display complete objects when they are large.

Weather data: This is an exercise in manipulating data. We will be using daily weather data from the Albuquerque International Airport (KABQ).

This is a continuation of HW03.

(30pts) **1. Apply, summarize, and test**

- (a) (10 pts) Use `ddply()` to find the 5-number summary by year for each variable, as well as the number of samples per year. Is it easier to do this on the long-form or wide-form data?
- (b) (10 pts) Use `subset()` and `ddply()` to find the 5-number summary of max wind and mean temp by month.
- (c) (10 pts) Propose and test a weather-related hypothesis using this dataset. Use the result with `\Sexpr{}` to refer to a statistic in a sentence to interpret the result.