Lab Assignment 6

PSTAT W 174/274

We will analyze adjusted monthly milk production measured in pounds per from Jan. 1962 to Dec. 1975 from Lab 5. And we can import the dataset from tsdl package as milk in R, and denote the milk time series as X_t. For comparison, we split the dataset into training set train and testing set test. The training set is used for model building, and the testing set is used for prediction verification and comparison.

```
library(tsdl)
milk <- subset(tsdl, 12, "Agriculture")[[3]]
```

(a). Split the dataset into training set train and testing set test. The testing set is the last 6 months of the data and training set is the rest of the first 150 months of the data.

(b). From previous lab assignment, we determine possible candidate models SARIMA$(p, d, q) \times (P, D, Q)_s$ for the series Y_t. Fit the training data to the chosen model.

(c). For the model you selected, do we need to set any coefficient to zero and why?

(d). For the model you selected, check the model stationarity and invertibility.