Time Series Notes 2.16.23

* Basics of ARMA or ARIMA
  + AR = auto regressive
  + MA = moving average
  + I = Integrated
* Is trned stochastic or determin
  + Stochastic – use differencing
  + Determinist – use regression
* Want variance to be constant over time – if not, can try to fix by logging dataset
* AR models
  + Explanatory variables are previous observations of own series
* Auto-regressive models – REVIEW!!!!!
* Really need to review differencing…
* Moving average models
  + AR has long memory because it carries information from the past – depends on t-1 and t-2 etc.
  + MA models have short memory – where was before doesn’t dictate where going next
  + MA models rely on residuals
    - Moving average is movement around a certain mean
    - A subt = residuals
    - Process is always stationary for any value of theta