[1] The data in DJIA.xls represent the closing values of the Dow Jones Industrial Average (DJIA) from 1979 through 2008.

1. Plot the time series.
2. Find a three-years moving average to the data and plot the results.
3. Using a smoothing coefficient of *W*= 0.30, exponentially smooth the series and plot the results.

[2] Refer to the data set given in [1].

1. Compute a linear trend forecasting equation and plot the trend line.
2. Compute a quadratic trend forecasting equation and plot the results.
3. Compute an exponential trend forecasting equation and plot the results.
4. Which model is the most appropriate, using adjusted *r*2 values and first, second, and percentage differences.

[3] Refer to the data set given in [1].

1. Fit a third-order autoregressive model to the DJIA and test for the significance of the third-order autoregressive parameter using  = 0.05.
2. If necessary, fit a second-order autoregressive model to the DJIA and test for the significance of the second-order autoregressive parameter using  = 0.05.
3. If necessary, fit a first-order autoregressive model to the DJIA and test for the significance of the first-order autoregressive parameter using  = 0.05.
4. Using the most appropriate model in a) – c), forecast the closing values for 2009 and 2010.