Time Series Plot Instructions

1) To plot the data:

Input the data in a single column in time sequence order
Choose Graph
Choose Time Series Plot
Choose simple—click ok
Choose your variable
Click on time/scale
Choose calendar then choose the appropriate time frame
Set the beginning point under “start values”
Click ok
Choose Labels
Place an appropriate title and subtitle for units of measure
Click Ok
Click ok

To place the graph in Word, right click on the graph and choose copy graph.

To move the graph or alter its size, right click on the graph and choose format object. Choose layout, then advanced, then through, click OK, click OK. You can then left click on the graph and move it. You can also resize it by choosing a corner, left click so that the cursor becomes an arrow and just move the arrow in to make it the graph smaller.

2) To find a linear trend model:
Choose Stat
Choose Time Series
Choose Trend Analysis
Place variable to be forecasted in variable dialog box
Choose an appropriate model type(linear in this case)
Place a check in generate forecasts
Number of forecasts: 4
Click OK

You will get the following output:

**Trend Analysis for netsales**

Data netsales
Length 23
NMissing 0

Fitted Trend Equation

\[ Y_t = 0.400791 + 0.800296t \]

Accuracy Measures

MAPE 13.2602
MAD 1.0824
MSD 1.7004

Forecasts

<table>
<thead>
<tr>
<th>Period</th>
<th>Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>19.6079</td>
</tr>
<tr>
<td>25</td>
<td>20.4082</td>
</tr>
<tr>
<td>26</td>
<td>21.2085</td>
</tr>
<tr>
<td>27</td>
<td>22.0088</td>
</tr>
</tbody>
</table>

To find a quadratic or exponential model simply change from linear to one of the other choices.

3) To find a Holt’s exponential smoothing model:

Choose STAT
Choose Time Series
Choose double exponential smoothing
Place the variable of interest in VARIABLE
Choose either OPTIMIZE
OR
USE then choose your level and trend
Check Generate Forecasts
Fill in the number of forecasts with an
Winter’s Exponential Smoothing is done in the same fashion. One exception is the seasonal length (quarterly data: 4, monthly data: 12, etc.) must be specified.

4) To find a decomposition model:

Choose STAT
Choose Time Series
Choose Decomposition
Place the variable of interest in VARIABLE
Choose an appropriate seasonal length (Example: 4 for quarterly data)
Under Model Components, leave it set for trend and seasonal
Check Generate Forecasts
Fill in the number of forecasts with an appropriate number (Example: 4 if quarterly data but no more than 6)
Click OK